

Record

Nov. 1945 —

Collection number book
of F. R. Fosberg

No. 24725 — 24941

Descriptive passages
perographed for files 1979
B. Decker

Pages

CAROLINE ISLANDS

<u>Truk Islands:</u> Moen I., near Mt. Tonaachau, Old village of Mechetiu, new location of Mechetiu, saddle bet. island and peninsula called Sabuk	24410-24428	54-59
- Moen I., slopes of Mt. Tonaachau	24429-39	58-61
- Tol Island, Mt. Uiniboet, Fason village	24440-24476a	62-69
- Udot, Folomo, Manitu village, old mission garden, Monua (Malua) village	24476-24502	68-77
- Tefan Island, between Mt. Chukuson and Mt. Chakuchap, Mesa village..	24503-24522	76-81
- Dublon, slopes of Mt. Tolowan	24523-24556	82-89
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<u>Truk Islands, General</u>	116-117
- Moen I.	24609-24613	118-133
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MARIANA ISLANDS

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- s. end of Masalog Ridge, Tinian City, near Marpo Wells, Mt. Lasso, near Lake Hagoya...	24739-24808	150-163
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Collection and Field Note Book

No. 14

Nov. 25, 1945 - June 9, 1946

(Nos. 24225 - 24941)

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CALIFORNIA

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1 Berejisman Fimbriate

2 Ujos Eragrostis am.

3 Kalekale Kalekale Anthyranthus

4 Belle bele Ipomoea

5 Uken nan Mounds

6 Koro koro (Massachusetts)

7 Koro Koro (Cordia)

8 Ujos aitolh Ujos aitolh

9 11 maroro Ujos maroro

10 Yon kulkulu Yon kulkulu Duglun

11 Motok motok Marham

12 Kenal kenyal Pasaan

13 Keras keras Potulun

14 Kuo Kuo Lida

15 Kuar kuar kuar kuar Kuar kuar

16 Motok astok motok astok Marham

17 Motok Motok G. K. d.

18 Kuar Kuar Kuar

19 Motok Motok Kuar

20 Kuar Kuar Kuar

21 Kuar Kuar Kuar

22 Kuar Kuar Kuar

23 Kuar Kuar Kuar

24 Kuar Kuar Kuar

25 Kuar Kuar Kuar

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. John A. Stevenson
FROM : J. H. Pritchard
SUBJECT: Collection of Manuscript Page

DATE: May 14, 1948

⁷⁻²⁻⁴⁸
There are eleven specimens of Page Four Manuscript from the U. S. G. collection. Ten specimens belong now to the U. S. National Archives, so you may put them in the collection. I will separate the specimens of say that are identifiable. Particularly I would like a name for the old specimens with the finding body.

Donor

~~Private~~

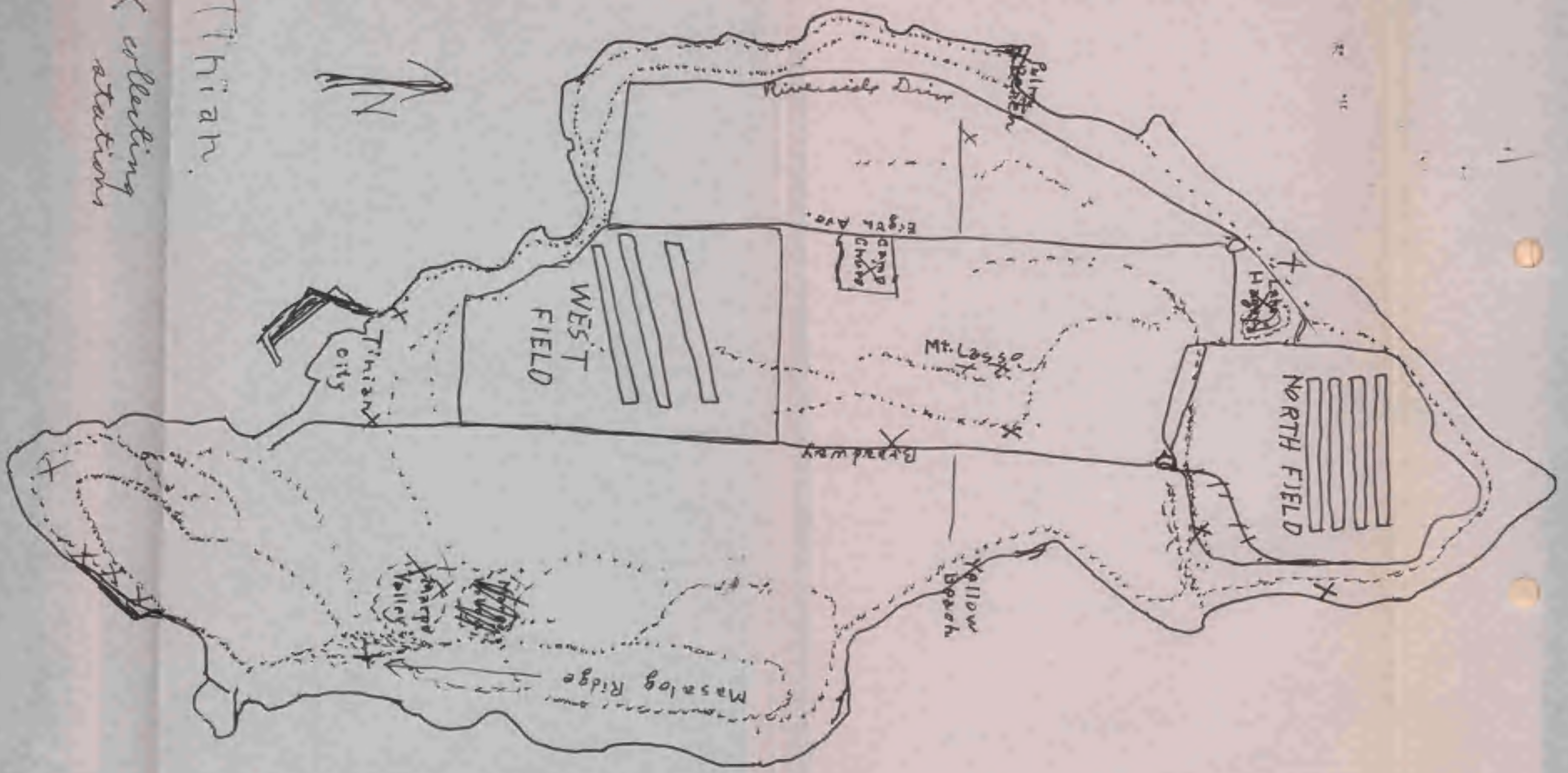
Old Brown Smith

and his family



X collecting stations

Tihian.



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Desmodium illinoense
var. *illinoense* (L.) Benth.
R. Br.

4

180

180

180

180

1945 - Virginia

Nov. 25 - Lee Boulevard

north of Fairfax

gentle slope wooded principally
with *Fagus grandifolia*

24225 *Selaginella apoda*

Dec. 3 - Sleepy Hollow, 1 mi.

s. of Falls Church, Fairfax Co.

26 *Quercus phellos* L.

edge of pasture in cleared
bottom land

Dec. 3 - 2.3 mi. s. of main
intersection, Fairfax, Fairfax Co.

dense pine forest (about 30 years old)
with little underbrush, gentle slope.

27 *Lycopodium complanatum* var. *flabelliforme*

small patch

28 *Polystichum acrostichoides*

occasional

29 *Chimaphila maculata*

common

30 *Chimaphila umbellata*

local

31 *Mitchella repens*

abundant

Dec. 3 - along Turkeycock Run,
1/3 mi. n. of Fairland, 6 mi. s. of
Alexandria, Fairfax Co.

Magnolia bog (Proc. Bot. Soc. Wash.)

Fairfax Co.

prostrate, pale green

tree 20 m. tall, 12 dm. thick

prostrate, extensively
creeping, sterile.

rhizome erect, fronds

prostrate or ascending.

erect from prostrate

underground rhizome, leaves

dark green, central portion

whitish.

erect from prostrate underground

rhizome, leaves dark green,

glossy.

prostrate, dull, dark

green, berries scarlet.

sphagnum on white gravel
oxygen water

1945 - Virginia - D.C.

24232 *Lycopodium obscurum*
common locally, large patches

33 *Lycopodium lucidulum*
rare, local.

34 *Alnus serrulata* Willd.
common

35 *Rhus vernix*
common

36 *Magnolia virginiana*
common, characteristic
Tree of this type of bog.

Nov. 26 - Washington, D.C.
12th + E Sts. S.W.

in edge of lawn along sidewalk
37 *Polygonum*

Dec. 8, 1945 -

Bird Sanctuary

Potomac River, Arlington
thicket at edge of slough

38 *Ailanthus altissima*

39 *Platanus occidentalis*

Dec. 9, 1945 - Sleepy Hollow, 1 mi. e.
of Falls Church, Fairfax Co.
thickly wooded bottom-land,
low second-growth woods.

40 *Amelanchier*

41 *Acer rubrum*

42 *Liquidambar styraciflua*

Fairfax Co.

erect from prostrate
underground rhizomes,
spike straw colored.
erect, dark green

shrub 3 m. tall

small tree 4 m. tall

small tree 6 m. tall,
a few leaves persisting,
white beneath.

fls. pink.

- small sapling
small tree 4 m. tall, 4 cm. thick,
bark smooth, exfoliating.

- small shrubby tree, 3 m. tall.

- small tree, 4 m. tall

small tree 6 m. tall, branches
green

6 checked
calculated
total

1945 - Virginia

1946

Dec. 30, 1945 - same

24243 Morus

44 Viburnum prunifolium
common

-1946-

Feb. 3 Roaches Run
Bird Sanctuary, Potomac
River, Arlington Co.

45 Ailanthus altissima
roadside thicket

March 10 Sleepy Hollow, 1 mi.
S. of Falls Church, Fairfax Co.

34 46 Catalpa
bushy old field

47 Crataegus [Discarded, sterile, winter specimen]
scattered trees in pasture

48 Xanthoxylum
on dead logs of Acer rubrum,
Quercus palustris, Ulmus americana

Fairfax Co.

7

sapling, ~~to~~ much branched, 3 m. tall
tree 5 m. tall, 12 cm. thick,
surrounded by bushy
~~and~~ root sprouts.

small colony, probably
a clone, of saplings of
various ages, 1-5 or 6 years,
fasciated, but only toward
the end of each season's
growth, the fasciations
of various forms.

sapling 3 m. tall, freely
branched.
much branched small
tree 4 m. tall, bark ^{light} gray,
spines shiny dark brown,
buds reddish.
black paint-like patches
on bark, black markings
in wood.

March 17 - Sleepy Hollow 1 1/2 mi.
S. of Falls Church, Fairfax Co.
24247 *Goodgera pubescens*
wooded slope, deciduous trees

Mar. 31 - Mulberry Grove,
(4 mi. W. of Vandalia), Bond Co. Ill.
Open road cut, bushy ravine
and edge of woods
31 50 *Erythronium album*
road cut

31 51 *Dicentra*
edge of woods

31 52
edge of woods
31 53 *Staphylea trifoliata*
edge of woods

31 54
wooded ravine
31 55 *Claytonia*
woods and wooded ravine,
common

31 56 *Dentaria*
wooded ravine, occasional

31 57 *Anemone*
wooded ravine, common
31 58 *Phlox divaricata*
woods, rare on flattish
ground and in ravine

leaves glaucous-green, variegated
with white.

bulb very deeply buried,
leaves variable in width
blue-green with variable
purple marking, buds
shell-pink, flowers
white.

leaves glaucous, corm
pink, flowers white.
flowers white.

bush, flowers white

flowers white

corm somewhat flattened,
stem decumbent at base,
leaves somewhat fleshy,
flowers white with pink
veins.

rhizome noduliform with
large segments, fls. white.
flowers quite pink

stoloniferous, flowers
purple.

1946 - Illinois - Penna. - Va.

- 24259 *Antennaria plantaginifolia*
common on roadside boulders
21 60 *Cercis canadensis*
occasional in woods

- April 2, 1946 - 3 mi. e. of
Washington, Pa.
61 *Corydalis flavula*
black ground, possibly
burned sometime back,
under roadside trees, rare.

- April 14 - Sleepy Hollow, 1 mi.
s. of Falls Church, Fairfax Co.
62 *Berberis thunbergii*
wooded bottom land, well
established

forming considerable
patches
shrub, calyx red,
corolla pink.

flowers yellow

straggling shrub 1 m. tall,
fls. cream. bronzed without.

1946 - ~~Vigginia~~ Calif.March 17 - ~~Alhambra~~ 100 ft. N. of
mi. S. of Falls Church, Fairfax Co.

2

April 20 - ^{2 mi. N. of} Turlock, Stanislaus Co.
cultivated ground around
dwelling, watered, sandy loam

24263 Poa

common weed, sun or shade

64 Malva

common weed, sunny places

65 Acacia verticillata Willd.
cultivated66 Sequoia sempervirens Endl.
cultivated, around drain

67 Hedera helix L.

escaped from cultivation,
established.

68 Vinca major

escaped from cultivation

69 Oxalis

escaped from cultivation, common.

70 Oxalis

escaped from cultivation, common

71 Oxalis cernua

escaped from cultivation,
common

72 Arminckia

abundant in field

petals glabrous, pinkish,
emarginate, little if any
longer than calyx.
straggly pungent shrub
- 3 m. tall, fls. yellow.
~~small~~ young tree 4 m. tall
heavy woody vine, leaves
dimorphic.

vine, flowers blue-violet

corms thick, tuberous, multi-
plying by offsets. flowers
bright pink with purple
lines toward center.

corms thick, tuberous, multi-
plying by offsets. flowers
white. Probably a sport
from D 24269.

stoloniferous, small plants
from bulbs, flowers bright
butter yellow.

flowers orange.

1946 - Oahu

April 27 - Driving around Lanikai, Kailua, up over Nuuanu Pali, down Nuuanu Valley - around Honolulu - notes on distribution of introduced plants.

Lambucus sp. - rare in 1937 - only noted in open air theater at University, now fairly common in cultivation around Honolulu.

Asystasia gangetica - noted in 1937 as established near University campus in a vacant lot - now one of the common weeds in Lanikai, Kailua and Honolulu, not up very high on Kailua - Honolulu road. Both purple and white forms noted, but purple much more common.

Paederia foetida - common along Nuuanu Pali road and even in Nuuanu Valley.

Eupatorium adenophorum - common along Nuuanu Pali road.

Catharanthus roseus - Established in Kailua.

✓ Verbesina encelioides - in the thirties only seen near Molekai and Pearl Harbor - now one of the common weeds in Kailua and many parts of Honolulu.

Spathoglottis plicata - is evident now everywhere where there is any amount of rain. Pali rd., Waikane, Manoa, etc. Common.

Messerschmidia argentea - common around Pearl Harbor, planted by Navy (Don Anderson).

1946 - Oahu

April 23 - Waikane - Schofield
Trail, Schofield side,24273 *Zanthoxylum* bushy forest, ridge top 2400-2500'24274 *Gouldia*75 *Gouldia*76 *Gouldia terminalis*
(coriacea with st. influence of *tylosia*)

Apr. 23 - same summit ridge

77 *Gouldia terminalis* var. *coriacea*
be side of bushy windswept crest 2600-2800'78 *Gouldia st-johnii* (st. contaminated
by *G. term.* v. *coriacea*)
windward side of79 *Gouldia st-johnii*
windward side of80 *Gouldia*

with heavy oily fragrance when broken,
tree 5 m. tall, flowers white,
- fragrant. (note small sepals)
- mass coll. 1 twig from a
tree, flowering where
- possible. (with #24275-6.)
- small shrubby tree
- (buds fixed)
- same (buds fixed)

small tree, leaves rather
dull (buds fixed)
flowers green

bush 1.5 m. tall, fls. green.
(buds fixed)

bush 1.5 m. tall, fls. green
fruit immature, fruiting
calyx lobes fleshy,
divergent (buds fixed).

mass coll. 1 twig from
each of trees within
reach of trail

1946 Oahu

Apr. 28 Waikane - Kahoofield
trail, Kahana side

wet brushy forest on steep slope 2000'-2400'

24281 *Hedyotis* ^{centranthoides var.} *glomerata*32 *Gouldia*33 *Hedyotis* ^{centranthoides var.} *glomerata*Apr. 28 same, Waikane
Valley.

800'

34 *Ficus*
planted along trailsubfruticent herb
with leathery leaves
buds purple (buds fixed)mass coll. 1 twig from
each tree within reach
of trail.subfruticent herb 1.5 m.
tall, fls. purple without,
green within.small tree, cauliflorous,
fruiting abundantly
on lower part of trunk,
more sparingly above
and on larger limbs.

May 13 - Eniwetok Atoll

Perry I. + Eniwetok I. have
been denuded almost
completely.

Japstan I., Jierom I., Igoim I.
and Mui I. seem still fairly
well covered with vegetation.

May 13 - Eniwetok Atoll,
Eniwetok I.

24235 *Ipomoea alba*
sand dunes facing inner beach
seaward slope of dune.
very local.

86 *Euphorbia atoto(?)* *chamissoi*
lower slope of dune. rare

87 *Ipomoea pes-caprae*
seaward slope of dune,
very local.

88 *Cassytha filiformis*
parasitic on *Ipomoea pes-caprae*,
rare.

same - sand flats around
buildings

89 *Eleusine indica*
common locally

90 *Eragrostis amabilis*
common locally

On Eniwetok sea mays,
Solanum lycopersicon
and *Ipomoea purpurea*
were seen in a garden.
Tomato is said to do well.

prostrate, densely carpeting
slope of dune, flowers
white, closed in afternoon.
leaves fleshy, veins
conspicuously impressed above + below.
leaves fleshy, white beneath.

prostrate, leaves somewhat
thick, sterile except for
one old fruit.
leaflets paravite, stems
green.

loose clumps, taller where sheltered.

depressed bunches,
mostly dead.

24291 *Scaevola frutescens* (Mill.) Kr.
common locally over entire island
(commonest shrub on island)

92 *Cynodon dactylon*
common locally,

93 *Messerschmidia argentea*
occasional generally

94 *Guettarda speciosa*
rare (possibly planted)

95 *Thaunsa involuta*
rare, one mat seen

96 *Portulaca oleracea* L.
common

97 *Portulaca quadrifida*
very common

98 *Lepturus repens* ^{Var. subulatus Forb.}
common everywhere

99 *Triumfetta procumbens*
common

24300 *Lenchus echinatus*
occasional

01 *Fimbristylis cyrrosa*
common

rounded bush 1 m. tall,
corolla white within,
thickened parts green
without, fruits white, fleshy.
— forming dense mats, scapes
erect.

— shrub 1.5 m. tall, leaves
silvery-green, fleshy,
flowers white.

— shrub 2 m. tall, sterile.

prostrate, forming
thin close mats on sand.

— prostrate, fleshy,
purplish.

— prostrate, dense, fleshy,
purplish, leaves thick
but compressed, arranged
in flattened masses,
flowers yellow, about
15-20 mm. across,

style branches 5, stamens
about 15. root thickened.

— forming bunches but
with runners forming
mats.

— prostrate, stems several
m. long, branched, forming
mats; flowers yellow!
leaves fleshy.

— loose small tufts

tufts, leaves rather stiff.

May 14 - Igarin Islet,
Eniwetok Atoll
flat sand mixed with
coral fragments, slight
swale in center but this
has been destroyed by
naval installation

(no makatea noticed)

(no Pandanus seen)

(one Cerbera seen, not collected)

(sterile grass seen, not coll.)

24302 *Morinda citrifolia*
not common, but several
small patches noticed

03 *Cordia subcordata*
only one small patch seen
in rather low brush toward
east end of island

04 *Pisonia grandis*
common in wooded central
part of island, this plant
on inner beach.

05 *Ipomoea alba*
occasional on inner margin
of woods

06 *Boerhaavia diffusa*
occasional patches in open shaded
sandy places,

vegetation is basically
a tall brush of *Scaevola*
with *Guettarda* quite
common, and *Pisonia*
common in main part
of island but dropping
out toward the ends.
Messerschmidia is
common on the outer
and inner edges, but
scarce inland. *Suriana*
only on west end, not common.
Coconuts planted, especially
at center

— small tree 4 m. tall,
leaves somewhat glossy
above, flowers white
shrubs 1-2 m. tall,
completely sterile.

— wind-beaten tree 5 m. tall,
staminate, flowers
fragrant, perianth green
but with revolute edge
whitish.

— vines mostly dried up at
this season. leaves of old
plant fleshy. (the better
leafy branch from a
different plant, just starting
this seasons growth.)

— very prostrate, forming large
thin mats. stems + petioles red,
leaves whitish beneath, fls. pink.

- 24307 *Portulaca lutea*
several small patches
near inner beach, in
rather open places
- 08 *Pisonia grandis*
common on main part
of island.
- 09 *Canavalia cathartica* Thunberg
occasional on inner side.
- 10 *Suriana maritima*
occasional, but only in
open places on extreme
west end of islet
- 11 *Triumfetta procumbens*
common but very locally,
mostly on open sand.
- 12 *Guettarda speciosa*
very common throughout
vegetation
- 13 *Caseytha filiformis*
occasional (this one
parasitic on *Guettarda*)
- 14 *Scaevola frutescens* (Mill.) Kr.
the dominant plant in the
vegetation, forming in
most places a dense bush.
- 15 *Messerschmidia argentea*
common, especially along
outer edges of vegetation

- stems ascending,
gray-brown, thick, whole
plant fleshy. (no fls.
seen)
- shrub 2 m. tall, pistillate,
very few seen with fruit.
- vine climbing over trees,
fruiting ones dead, living
ones sterile.
- bush 1 m. tall, flowers
butter-yellow. (only
this one bush seen flowering,
others all past fruiting).
- prostrate, leaves fleshy,
flowers yellow.
- shrub 1.5 m. tall (others
several times as tall),
flowers white, very
fragrant, fruits apparently
not quite mature.
- leafless parasite, stems
yellow-green.
- shrub 5 m. tall (commonly
this tall except toward ends of islet)
flowers white (even on thick
parts) with purple markings
in sinuses.
- tree 5 m. tall, (others even
taller), leaves silvery green,
fleshy, flowers white, fragrant

- 24316 *Cocos nucifera* L.
commonly planted almost
throughout islet.

a single tree of *Mangifera indica*
and one of *Artocarpus altilis*
reported on good authority, not seen
by me.

May 15 - Japstan Islet,

Eniwetok Atoll

flat coral sand toward
inner beach, becoming
more and more rocky
toward outer beach and
along passage.

Vegetation basically
a brushy ^{forest} *Scaevola*,
Pisonia, *Guettarda*, *Cerbera*,
with some *Morinda citrifolia*,
scattered *Pandanus*, the
inner portion planted
to coconuts.

The *Pisonia* is mostly
rather small, but with
some larger trees. These
almost leafless - possibly
because of the dry season.

tree 10 m. tall, leaves
several m. long; panicles
enclosed in a woody
spathe before anthesis,
at anthesis both ~~of~~ ^{of} sexes
of flowers and panicles
ivory-white, resembling
carved ivory. Specimens
represent only small
fragments of panicle & leaf.

The number of husks
on ground indicate that
copra was produced
here before the war.

Pisonia is in flower and
so abundantly so that
the air is perfumed.

This vegetation is
very disturbed, both
by bomb craters,
bulldozer activity
and with a maze of
roads.

The forest becomes
much lower and more
scrubby toward the outer
beach, as the ground
gets rockier and rockier.
Nowhere is there the
dense solid growth
observed on Iquirin.

The *Pandanus* is not especially
variable, except in leaf length.

24317 *Pandanus tectorius* Park.
occasional, especially
toward inner beach.

18 *Guettarda speciosa* L.
common throughout
island

19 *Xyneria americana* L.
very rare, 2 plants seen on
mubble toward outer beach

20 *Eleusine indica*
around village

21 *Fleurya nederalis* Gaud.
occasional

22 *Triumfetta procumbens*
common

23 *Portulaca quadrifida* L.
openings, common

24 *Cenchrus echinatus*
rare, ~~around dwelling~~

25 *Lepturus repens* (Forst.)
common in openings, this clump
on lagoon beach.

26 *Portulaca lutea* Sol.
common in open places

27 *Setaria verticillata*
rare, one clump seen in
bottom of ~~depression~~ excavation

tree 8 m. tall, sparsely
branched, fruit green
distally, ~~yellow~~ fleshy
part yellow, sweet, with
peculiar ether-like flavor,
not at all irritating,
eaten by natives.
shrub 2 m. tall,
fruit green, fls. white.

rigid bush with weak
spines, leaves yellow-green,
fls. yellow, fruit immature
small tufts

stems red, fleshy, leaves
glossy, low rounded
bushy herb.
prostrate, root system very
extensive, as long as branches, sterile!
prostrate, roots enlarged,
plant fleshy, fls. yellow,
dense clump.

dense clump of erect culms
with ~~runners~~ runners
spreading from sides of clump.
spreading, stems fleshy,
leaves fleshy, flowers
yellow 1.5 cm. across, stamens
many (over 25).
dense clump.

- 24328 ^{Digitaria} *Frasera* *insularis* (L.) May
small patch in open ground
- 29 ~~*Portulaca*~~ *Ochrosia oppositifolia*
common in bushy vegetation
on rocky ground
- 30 *Cassytha filiformis*
parasitic on *Guetarda*, the
host completely covered and
almost dead.
- 31 *Terminalia catappa* ^{samoensis} Rech.
rare, 2 small trees on rocky
ground along passage.
- 32 *Pisonia grandis*
very common, co-dominant
to dominant in vegetation.
- 33 *Tacca leontopodioides*
rare, one clump seen ~~in~~
in rocky soil in opening.
- 34 *Boerhavia diffusa*
occasional
- 35 *Morinda citrifolia*
common
- 36 *Scaevola frutescens*
abundant, co-dominant in
vegetation
- 37 *Pisonia grandis*
very common, co-dominant
in vegetation.
- 38 *Cordia subcordata*
rare, one tree seen on inner beach

small bunches.

small tree 5-5 m. tall,
buds white. fruits on
ground beneath.
- leafless parasite, stems
yellowish green, flowers
white.

tree 4 m. tall, densely
branched, fruit immature.

low trees, some getting
~~very~~ large.

- leaves just unfolding,
tubers about 5-8 cm.
- below surface of soil.
- prostrate, stems red,
small tree 3-4 m. tall, leaves
glossy, flowers white
fruit translucent, when
decomposing with a power-
ful strong odor.
- shrub 1.5 m. tall (others
much taller), flowers
and fruit white.
- shrub 3 m. tall, flowers
green with whitish ^{reflexed} margins
fruit immature.
- tree 10 m. tall, flowers
delicate, brilliant orange,
fruit green.

- 24339 *Messerschmidia argentea*
common, especially along beaches
- 40 *Digitaria pruriens* var. *microbachne*
fairly common in open
places and under coconuts
- 41 ~~*Thunbergia*~~ *Thunbergia involuta*
occasional in sandy places
toward inner beach
- 42 *Sporaea alba*
abundant, climbing over
everything
- 43 *Fimbristylis cymosa*
common in open sandy places
- 44 *Eragrostis amabilis*
common, especially in open
sandy places.

May 16 - Aomon Islet,
Eniwetok Atoll

flat, very broad from
lagoon to outer beach.
mostly sandy flats,
changing to broken coral
rock as outer beach is
approached.

Practically entire islet planted
to coconuts. The inner part
clear beneath, with a grass
covering of mixed *Lepturus repens*
and *Eragrostis amabilis*. Nearer
the outer beach a brush of
Scaevola and *Pisonia* occupies
the space beneath the trees. This
seems to be occasionally cleared

tree 5 m. tall, flowers white,
- fruit green, ~~for~~ fleshy.
small bunches

very prostrate, forming
large thin mats.
- fruiting spikes erect.
- extensive vine; leaves
not fleshy, flowers
white,
- tufts

spreading, prostrate tufts.

out, and in any given place
seems to be of uniform age.
Here and there it is mixed
with *Morinda* and *Guettarda*
with occasional *Messerschmidia*.
The latter forms a conspic-
uous fringe around the
outer and channel beaches.
Just inside this *Cordia* is
rather common.

Two *Boerhavia*s are common, one more
so ~~to~~ toward the outer, the other toward
the inner beach, but both present
both places, not noticeably intergrading.

Coconut "waeni" and *Pandanus* "Bop"
not collected. Informants Chief Joseph
and Chief Brown Smith.

24345 *Fimbristylis cymosa*
local in grassy open
land under coconuts near
inner beach.

46

on stone walls of well in
center of island, brackish water.

47 *Eragrostis amabilis*
common in sandy disturbed
places, along trails and around
village.

48 *Achyroanthus aspera*
one small patch near
center of island.

49 *Ipomoea alba*
common toward ~~inner~~
~~inner~~ outer side of island.

50 *Morinda citrifolia*
common locally, especially
toward outer beach.

51 *Cordia subcordata*
common along a strip just
in from the outer beach.

52 *Messerschmidia argentea*
abundant along outer and
channel beaches, occasional
inland.

53 *Lepturus repens*
abundant throughout the island,
especially in open places,
where it is the dominant plant.

54 *Thunarea involuta*
occasional on rocky soil
toward ~~inner~~ outer beach.

tufts, spikes already
shattered.

"berejisman"

greenish slimy ~~th~~
coat on stones.

spreading loose clumps
"ujos" (perhaps ~~is~~ simply
meaning "grass")

erect herbs, 1 m. tall.
"haleklele"

vine climbing over
bushes. "bele"

bush 3 m. tall, flowers
white, ripe fruit white,
looking like a potato "nen"
sterile shrubs 2-3 m.
tall. "hono"

tree 7 m. tall, flowers
white, leaves fleshy,
silvery green. "kirin"

tufts, spreading by
runners. "ujos aitok"

very prostrate, forming
thin mats; sterile.
"ujos maroro"

24355 *Digitaria pruriens* var. *microbachne*
rare, on rocky ground near
outer beach

56 *Boerhavia ~~tamaritensis~~ diffusa*
common on rocky ground
near outer beach.

57 *Pisonia grandis*
co-dominant with *Scaevola*
in basic vegetation of island.

58 *Portulaca lutea*
common, especially in open
places.

59 *Sida fallax*
common in openings, especially
toward outer beach.

60
disease on *Sida fallax*
Not determinable.

61 *Scaevola frutescens*
co-dominant with *Pisonia*
grandis in basic vegetation
of island

prostrate rooting at nodes,
culms spreading to ascending
— "rijos kulbuli"
prostrate, stems red.
leaves purple beneath, thin,
flowers pink. (found
with # and not
especially intergrading
with it) "matok"

(not seen fruiting) (not
seen affected by *Albugo*)
shrub 3-4 m. tall,
stems brittle (others
seen much larger)

— "kañae" (pronounced kangae)
stems reclining to
ascending, whole plant
fleshy, flowers not seen
(11:30 a.m.). "kiran".

shrubs 1-1.5 m. tall,
flowers orange with
red patches just above
claws of petals, making a
red-centered flower. "kio"
(attacked by powdery mildew^{#24360})
plants more or less
~~seem~~ unhealthy looking,
practically sterile, when
heavily infected.

bush 1 m. tall (others
to 3 m. or more), flowers
white, sinuses tending to be
purple marked "ma kinat"

- 24362 *Boerhavia diffusa*
common, especially inland
(but growing with #24356 and
not especially intergrading with it)
- 63 *Albugo boerhaviae* (Lange) Speg.
fairly common on *Boerhavia diffusa*,
but only on the fleshy-leaved
form of it (var. *tetrandra*?)
- 64 *Guetarda speciosa*
common throughout island.
- 65 *Cassytha filiformis*
parasitic especially on
grass (*Lepturus repens*, etc.)
but on other plants also, very
abundant.
- 66 *Triumfetta procumbens*
common throughout island
especially in open places.

May 17 - Eniwetok I.

Eniwetok Atoll

sandy flats around buildings.

- 67 *Euphorbia hirta*
rare, one plant seen
- 68 *Vernonia cinerea*
local
- 69 *Digitaria pruriens* var. *microbachne*
local

prostrate, stems green
to reddish, leaves sub-
fleshy, white beneath,
flowers pink (larger than
in #24356) "matok aikok"
(commonly attacked by albugo #24363)
producing a conspicuous
alteration in growth
habit)

shrub 2 m. tall, flowers
white, ripe fruit white,
fleshy, subglobose.
"wut"

forming great patches
on grass, stems yellow-
green; flowers white,
fruit translucent white,
pericarp surrounding
but not touching ripened
ovary. "kenen"
main stems prostrate,
branches erect (in shade,
in full sun entirely
prostrate), flowers yellow.

tips arching.

herb up to 1 m. tall,
flowers purple.

- 24370 *Mirabilis jalapa*
one plant seen
- 71 *Sida fallax*
occasional near west end of islet.
- 72 *Amaranthus viridis*
one small patch seen

May 16 - Hosaka collected
Pemphis acidula and
Luviana maritima on
Piradi Islet, saying they
were abundant.

May 17 - R. Oakley collected a
specimen of *Artocarpus altilis*
on Japstan Islet. It represented
the one tree. (records of natives
visiting Japstan to collect
breadfruit apply to Pandanus,
which the naval people
mistook for breadfruit.
Oakley searched for the
unmolded mango but was
unable to locate it.

- bushy herb, flowers crimson,
closed at 11:20 A.M.
- plant prostrate (others seen
more or less upright), flowers
orange, with reddish spots
on petals just above claw.
- prostrate, stems purple
striate, spikes purplish.

May 18 - Engebe Islet,
Eniwetok Atoll

This islet was almost completely denuded. At the outer end a few tattered remnants of forest remain, mostly *Pisonia* and *Messerschmidia*, with *Scaevola* between.

In other parts there is grass and flats on which the bushy vegetation is beginning to come back. This process is interesting in that it is almost unaccompanied by succession. Of course, a few weeds gain a foothold in many places before the *Messerschmidia* and *Scaevola*, and in the grassy parts a definite vegetation develops. The grass is mainly *Lepturus* and *Eragrostis*. It seems to retard rather than further the development of the bushy type, which in the more gravelly or rocky types of soil comes back directly.

I would judge that the *Pisonia* is a later member of the vegetation, coming in in the shelter of the *Scaevola*

and *Messerschmidia*.

Remnants of cultivation are scattered here and there over the island, especially in the more sandy places and around buildings. Tomatoes form luxuriant vines and excellent fruits, though very few fruits were setting when we were there.

Cucurbits of several kinds seemed to do fairly well, though they were more or less chlorotic and set few fruits. *Ricinus* was flourishing as a dooryard plant. Mr. MacMillan mentioned a ground (prob. *Lagenaria ciceraria*) which I didn't see. Most surprising of all was a small patch of broom corn.

The coconuts were almost all gone.

How the single bush of *Pluchea odorata* got there is hard to guess.

- 24373 *Digitaria pruriens* var. *microbachne*
common locally, especially
around buildings
- 74 *Solanum lycopersicon*
small patches persisting
from cultivation
- 75 *Citrullus vulgaris*
small patches, persisting
from cultivation
- 76 *Cucurbita maxima*?
growing over bomb-shelter
- 77 *Ricinus communis*
planted around building
- 78 *Cenchrus echinatus*
very abundant over all
the island
- 79 *Cynodon dactylon*
common locally
- 80 *Cucurbita maxima*?
one patch seen, persisting
from cultivation
- 81 *Morinda citrifolia*
rare, 2 or 3 bushes seen
- 82 *Vernonia cinerea*
common in one place
- 83 *Sorghum vulgare* var. *technicum*
persisting from cultivation
- 84 *Eleusine indica*
common everywhere

loose bunches, tending
to cover the ground.

vines luxuriant but
flowering sparingly,
— setting very few fruits.
— plants prostrate, flowers
yellow, fruits globose,
weakly striped, immature
(plants chlorotic, setting
few fruits).
— plant prostrate, leaves
with gray patches,
flowers yellow, fruit
— very immature.
— shrub 2 m. tall, staminate
flowers yellowish, pistillate
red.
— spreading tufts.

forming dense turf

prostrate, extensively
creeping, flowers yellow,
— leaves green, without gray spots.
— bush 1.5 m. tall, flowers
white, leaves glossy.
— erect herb, up to 0.3 m.
tall, heads purple.
— erect herb 2 m. tall.

plants vary in size
with protection of location.

24385 *Euphorbia* *chamissoi* Benth.

86 *Fimbristylis cymosa*
common near inner beach

87 *Eragrostis amabilis*
common everywhere

88 *Brassica*
in open field, only one
seen, ~~the~~ probably persisting
from cultivation

89 *Sida pallas*
common locally

90 *Amaranthus* *dubius*
small colony near
windward side
near buildings

91 *Wedelia biflora* DC.
local on sandy or rocky
plate.

92 *Setaria verticillata*
common, this plant from
slope of rubble hill

93 *Sida pallas*
common, especially toward
~~windward side~~ outer beach

94 *Boerhaavia diffusa*
common locally on ~~near~~ outer
beach

leaves pale beneath,
flowers sticky.
tufts

prostrate spreading
tufts.
leaves crispate,
petioles white.

herb up to 0.8 m. tall,
stems reddish.

prostrate with ascending
branches, forming
extensive low tangles.
rays yellow. leaves
more or less fleshy.

shrub 0.7 m. tall, flowers
orange with reddish
spots above claws of
petals.

prostrate from thick root,
~~the~~ stems red, leaves
somewhat fleshy, pale
to reddish beneath,
flowers pink.

- 24395 *Lepturus repens*
common all over islands
- 96 *Messerschmidia argentea*
common, especially toward
windward side, codominant.
- 97 ~~*Guettarda*~~ *Scaevola frutescens*
~~bush~~ common, especially
toward outer beach
- 98 *Guettarda speciosa*
occasional
- 99 *Flourya ruderalis* Gaud.
local ~~on~~ ~~on~~ on roadsides
- 24400 *Portulaca quadrifida* ~~campanula~~
common everywhere
in open ground.
- 01 *Trumfetta procumbens*
common
- 02 *Pisonia grandis*
common toward ~~outer~~
outer beach
- 03 *Tribulus cistoides* L.
one small patch seen in
open flat.
- 04 *Ipomoea pes-caprae* (L.)
patch near east passage
- 05 *Pluchea odorata*
one bush seen, ~~so~~ ~~is~~ somewhat
sheltered by embankment.

bunches with runners
spreading from them
small tree 5 m. tall,
flowers white, leaves
silvery green, fleshy.
rounded bush, flowers
and fruits white.

bush 1.5 m. tall,
flowers white.
stems red, fleshy.

- prostrate, fleshy,
flowers yellow, 1 cm. across,
petals apiculate.
- prostrate, extensive
fls. orange-yellow.
- small tree 4 m. tall
(others much larger),
leaves on ~~lower~~ ^{upper} ~~inner~~ ^{outer} side
of tree fleshy, ^{glossy} ~~in other~~
side thin & dull.
- prostrate, extensively
creeping, flowers yellow,
one at or near end of
each stem.
- prostrate, extensively
creeping, leaves fleshy,
scarcely notched,
flowers purple, open
during forenoon.
- low rounded bush, 1 m.
high, heads pinkish.

52 1946 - Marshall Is.

24426 *Ipomoea alba*
common

07 *Chloris inflata*
common here and there
about buildings

08 *Portulaca oleracea*
common everywhere

09 *Cucumis melo*
a few plants persisting
from cultivation

Eniwetok Atoll

53

trailing on ground,
succulent, leaves
scarcely fleshy, veins
impressed above.

prostrate, often forming
great mound-like
masses up to 1 m. or
more across, fleshy,
flowers small (5-6 mm)
stamens 10 or less.
plants prostrate,
flowers yellow,
fruit about half grown.

May 23, 1946 - Moen I., saddle
~~at~~ Mt. Tonaachan and main part of island
 weedy disturbed ground

24410 *Chrysopogon aciculatus*

11 *Paspalum conjugatum*

12 *Cenchrus*

13 ^{stink leaf spot}
 rust on *Cenchrus* (24412)

May 23, 1946 - Moen I. old village
 of Mechetin, inside of bay of Bou.
 cultivated and weedy
 marshy land at base of hill
 on flat behind ~~the~~ ~~beach~~
 shore

14 *Morinda citrifolia* L.
 above marsh level

15 *Columella trifolia*
~~at~~ ~~at~~ at and above marsh level

16 *Physalis*
 just above marsh level.
 in deep ^{marshy} vegetation

17 *Ipomoea reptans*
 growing in ponds in standing
 water.

prostrate, clinging tightly to
 ground, scapes erect.
 - stems prostrate rooting
 at nodes, scapes erect,
 spikes divergent.
 culms spreading from
 root crown, spikes
 - cylindrical
 purplish brown spots
 on leaves.

shrub 7 m. tall, flowers
 - white.
 - vine climbing on other
 vegetation, panicles
 - flat-topped, fls. green.
 slender herb, tangled
 with other plants,
 - flowers pale yellow with purple center.
 stems inflated; plant
~~is~~ said to have
 been introduced by
 Japanese, young tips
 eaten.

24418 *Ipomoea digitalis* L.
common

May 23, 1946 - Moen I. new location of
Mechetin, on S. n. e. coast on pen-
(informant about mile) c
narrow mangrove swamps
and village grounds back of it.

19 *Excoecaria agallocha*
common

20 *Rhizophora mucronata*
dominant in vegetation

21 *Davallia solida*
common on tree trunks at
edge of and back of mangroves

22 *Hedyotis biflora*
on base of tree trunks at
edge of mangroves

~~Oaksley - same loc. & date
rust on sugar cane~~

23 *Vernonia cinerea* (L.) Less.
weedy ground around village

May 23, 1946 - Moen I.
saddle bet. island and peninsula
called Labuk.
abandoned cultivated ground,
used as gardens by the Japanese

24 *Calceolaria* *Hypoxis* *suaveolens* Poir.

vine climbing in trees,
flower bright purple.

lactiferous, leaves thick,
small tree, sap said
to be ~~to be used for~~ cause
skin irritation "ousis"
small tree with arching
prop roots, flowers cream
whitish; leaves with
distinct mureo, leathery.
"chia"
"katu"

prostrate to ascending,
leaves fleshy, pale
beneath, corolla pale
lavender, tube swollen,
throat constricted, lobes
erect. "nisanfonu"
fls. purple. "ennentuko"

Oaksley - same loc. & date
rust on sugar cane(?)
+ scab on *Citrus aurantiifolia*.

tangled herb, strongly
aromatic, flowers
violet. "leketek"
"neketek"

1946 Truk Is. (Caroline Is.)

24425

Wedelia biflora

common in openings all over island.

2

26

Passiflora foetida L. var. *hispida* (Desf.) Killip
common among weeds

27

Cassia

28

Vigna

May 23, 1946, Moen I. slopes of Mt. Tonaachau

the slopes of this mountain, and apparently of others in the island group were apparently once well wooded. Native cultivation has broken down this vegetation completely. Breadfruit and Coconuts have been planted to the tops of the mountains. Patches of woods (second growth) and thickets persist,

Moen I.

prostrate with ~~erect~~ ^{ascending} branches, rays & disk yellow.

vine, flower white with basal part of corona lobes purple, fruit orange, sweet and of fair flavor, herbage with unpleasant odor but not strongly so.

erect herb 1.5-2 m. tall, flowers yellow. said to have been used as a substitute for tea by the Japanese during the war. vine with erect peduncles; flowers purple with a white straight keel. eaten by natives and Japanese.

especially on steep places. The Japanese cut down many of the coconuts and breadfruit and planted sweet potatoes, which are still abundant. Many open places are covered by *Miscanthus japonicus*. The main ^{high} trees and shrubs are *Glochidion*, *Premna*, *Acalypha*, #24439, etc. *Wedelia* is common. *Ipomoea* sp. #24418 covers the hills. *Manihot* is also commonly cultivated.

- 24425 *Premna obtusifolia* R. Br. (det. L. S. Gentry)
occasional in thickets

- 30 *Glochidion*
most common tree on slopes
and ridges

- 31
rare on slopes & ridges

- 32 *Acalypha*
very common on slopes
in thickets

- 33 *Stachytarpheta dichotoma*
in open grassy places

- 34 *Lelia*
weed in cultivated field

- 35 *Cyperus*
weed in cultivated field

- 36 *Derris* ^{abandoned}
weed in cultivated field

- 37 *Macaranga*
~~shrub~~ in thickets

- 38 *Glochidion*
in thickets, common

- 39 *Commersonia bartramia* (L.) Merr.
occasional on slopes

- shrub 2-3 m. tall, rather
unpleasantly aromatic;
flowers greenish white;
fruit green, ripe ones black.
- small tree, wood pink,
dense; flowers yellow;
fruit green, seeds red.
- (wood sample)
- shrub 2 m. tall, flowers
pink
- shrub 2 m. tall

flowers deep blue-purple

dense erect bunch

small dense tufts

- sterile vine, leaves
~~flat~~, glaucous beneath.
- shrub 2 m. tall,
fls. greenish
- shrub 3 m. tall,
flowers yellowish.
- shrubby tree 5 m. tall,
fls. white.

May 24, 1946 - ~~Tol~~ Tol I.,
Mt. Uniboet,
montane rain forest covering
top third of mountain

24440

Pteris

common in shade

41

Nephrolepis

common in openings

42

Glochidion

occasional on slopes

43

Asplenium

base of tree trunk

44

Piper

~~common~~

45

Cyperus

along trail

46

Psychotria

common

47

Selaginella volkensii

common on wet rocks

48

Polypodium

very local on top of mountain

49

Eugenia

rare

50

~~Intsia bijaya~~ Cynometra

one of the commonest trees in

51

Piper

52

Acalypha

common

53

Acalypha

common

frond not plane, young
ones especially with
- pinnal raised.
small tree 15 m. tall,
fls. yellow.

vine, climbing in lower
branches of tree, aromatic
when broken.

tufts

shrub 3 m. tall, flowers
white.
erect.

small tree

tree 20 m. tall, 5 dm. thick

920' vine, climbing in tree,
leaves pale beneath

820' shrub 2 m. tall,
- staminate spikes weak.
shrub 2 m. tall, pistillate
spikes erect, styles red.

24454

top of mt.

55 Macaranga
common on top of mt.56 Psychotria
common on top of mt.57
occasional on top of mt.58 Psychotria
prob. same as #24456,
growing with it.59 Cordyline terminalis
scattered along trail60 Psychotria
rare, one plant seen on top of mt.61
common, terrestrial62 Zingiber
occasional, top of mt.63
common on top of mt., seeds
germinating everywhere64 Pipturus
occasional on slopes65 Geocardia herbacea
common along trail on slopes66 Psychotria
common on slopes67 Pipturus
occasional on slopesshrub 2 m. tall
- fruit immature
tree 10 m. tall

shrub 3 m. tall

tree 8 m. tall, spreading,
- flowers white.
shrub 1.5 m. tall,
fruit yellow.- ~~see~~ relatively small
plants only seen, buds
white. "tin"- shrub 2 m. tall, flowers
white, stamens exserted.
stems ascending, fleshy,
leaves thin, flowers dull yellow,
leaves dark green, paler- ~~below~~
large tree, aromatic, seed
grated, mixed with coconut oil to
apply to hair.
shrub 2 m. tall.prostrate, forming mats,
scapes erect, flower white,
- fruit red, fleshy.
shrub 1.5 m. tall, fruit
immatureshrub 3 m. tall, spreading,
pendent, stigmas white
leaves clear green beneath

24468 *Panicum*

lower edge of native forest

69 *Randia carolinensis* Val.

very common in entire forest

70 *Randia carolinensis* Val.

very common in entire forest

same - but lower slopes of mountain up to 250 m. mostly coconuts and breadfruit, with undergrowth and plots of Manihot, etc.

71 *Psychotria*

rare in undergrowth

72 *Curcuma*

rare in undergrowth

same - low terrace near bay, Fason village.

Breadfruit, coconuts, etc. with small streams and undergrowth, small patches of trees, etc.

73 *Caladium bicolor*

~~established~~ established locally in wet places

74 *Citrus aurantiifolia*

commonly cultivated

75 *Paspalum vaginatum*

abundant, dominant in marshes along bay.

tangled in undergrowth

tree 10 m. tall, flowers white.

Bos

Bos

clump of sprouts 3 m. tall. fruits not completely grown.

shrub 3 m. tall, ^{under} white. "nen" (from Hen Kaercher)
leaves somewhat pinnate, root lemon yellow within, aromatic; bracts rose, flowers cream without, yellowish within (inner parts).

Colococcus seen here ~~quite~~ ^{very} commonly.

leaves white, veins and margins outlined in green, ~~to~~ petioles purple.
tree 5 m. tall, leaves dark green, fruit turning yellow.

24476a *Crotalaria* ~~critica~~
in small clearing

————— *Enhalus acoroides*
used for making mats - fibers from
edges of leaves dried, twisted
into twine.

May 25 - Folomo, Udote
broad mangrove swamp
that have largely been
destroyed. When American
bombers sank oil tanker
the oil washed in among
the mangroves, caught fire
and burned them.

24476 *Sonneratia alba* 3 km.
occasional

77 *Bruguiera*
common

78 *Bruguiera*
common

79 *Hedyotis biflora*
edge of stone path in swamp

erect, 1.5-2 m. tall, flowers
yellow wings with dark lines.

tree 5 m. tall, filaments
many, white. Pneumato-
phores narrowly conic, white
- usually tree 2 m. tall (others
much taller). Calyx + hypanthium
red ~~yellow~~ ~~salmon~~
prop roots close, masses
pneumatophores rounded,
knee-like

tree 5 m. tall, calyx + hypanthium
greenish, petals salmon-yellow
prop roots close to trunk
pneumatophores blunt, knee-like
prostrate, leaves thick,
base beneath, flowers pale
lavender.

2443m

occasional

May 25 Udot I, Penia village
fr. waty marsh inside
beach road mangrove
without, but sparse.

- 31 *Cyrtosperma merkusii* (Hussk.) Schott
cultivated in marsh, ^{det DHK}
abundant. 6/1998

32 *Polygonum*

common in edge of marsh.

May 25 - Manita village,
Udot I.

cultivated lowlands
back of mangrove swamp
and beach. Flats with
marshes and tidal channel
separated by hard, bare
basalt outcrops which
run right down to the beach.

Udot

bushy tree mostly
unopened buds

leaves sweet petioles
variably ~~spiny~~ greenish.
leaves up to 2 m tall
not leaf green, glossy,
petioles curved where
inserted in blade, peduncles
about 1 m. tall sheaths
light green, older not
unpleasant. ~~some~~
Corns an important source
of food eaten at about 2-3
years, at flowering time
these leaves from different
plants to show variation
in fructification. "pala"
submerged stems
extensive, flowers white.

Coconuts + breadfruits are principal
crops - also Manihot and banana.
Scleria very common in marshes
Barringtonia racemosa along
tidal channels.

24483 Dennis

at top of beach, locally common.

~~84 Thespesia populnea~~

84 Thespesia populnea

occasional

85 Bambusa vulgaris Schrad. ex Wendl.
rare, planted.86 Barringtonia
abundant along small
streamlets or tidal channels.

87 Canavalia ensiformis (L.) DC

88 Polyscias ^{tricholepta}
ornamental in yard89 Polyscias
ornamental in yard90 Ficus
very abundant in marshes
also invading cult. land.

Udot).

sterile vine growing
on ground and on base
of coconut trees."ulelipot", not used as
fish poison.- tree 6 m. tall, wood used.
"pono"- ~~plant~~ clump of small culms
2 m. tall, sheaths from
4th & 5th nodes, sheaths
pendent from the middle
part of attachment.Other culms seen from
same clump, but in use,
that must have been
8 or 10 m. tall, nodes about
2 to 2.5 dm. apart.
said to have been brought
in by Japanese.- shrubs 2-3 m. tall,
inflorescence pendent,
~~filamentary~~ petals
white or greenish white,
stamens pink, style
deep pink. "sol" pronounced "saur"
erect but becoming
vine-like, pods green.

Introduced by Japanese.

- very erect; leaves
variegated. shrub 2.5 m. tall.
sterile - dense shrub 1 m. tall, sterile.herb 1-1.5 m. tall, from
dense root crown.

1944 - 7 mks Is. (Caroline)

- 24491 *Stachytarpheta*
cultivated in gardens
as ornamental.
- 92 *Lantana camara* f. *aculeata*
cult. in garden as ornamental.
- 93 *Euphorbia heterophylla*
cult. in garden as ornamental

- 94 *Hernandia ovigera*
edge of beach

- 95 *Derris*
common everywhere in
disturbed ground.

May 25 - Udot Is., old mission
garden ~~at~~ in saddle bet.
Monua (Molua) and Manitu
villages.

- semi-cultivated ground.
- 96 *Capsicum frutescens*

- 97 *Morinda citrifolia* L.

- 98 *Citrus aurantium*

Udot

- shrub 1 m. tall, trimmed
into a hedge, fls. deep
blue-violet.
- shrub 2.5 m. tall, fls.
~~yellow~~ yellow, turning pink.
- shrub 1 m. tall, patches on
bracts varying from
salmon to white. said
to have been red to start
but getting gradually
whiter. Perhaps a deficiency.
- tree 1 m. tall, leaves
leathery, fls. greenish white.
fruit fleshy, white. "aguan"
- wine creeping on ground,
leaves glaucous beneath.
sterile. "up" or "ub" roots
pounded and used to poison
fish. used in quantities of
a large double handful.

Many cultivated species said
to have been brought from Ponape
by missionaries.

- shrub 1 m. tall; fls.
greenish.
- bush 3 m. tall; flowers
white; fruit eaten when
ripe and soft. "napui"
- tree 2 m. tall, apparently
free from scab that attacks
C. aurantiifolia not far away.
varies sour.

1946 Truk Is. (Caroline)

24499 *Annona muricata* L.May 25, Udot I., Monua (Moluä)
village24500 *Citrus aurantiifolia*
semi-cultivated land in village01 *Pemphigus acidula*
top of beach02 *Xanthomacrus* (Horn) Thayer
on *Citrus aurantiifolia* 24500May 27 - Fefan I., saddle
bet. Mt. Chukuson & Mt.
Chukuchap, bet. Mesa
Village and Sanuk (above
Foudjuén Village)open grassy slopes with
Paspalum conjugatum, *P.*
orbiculare, small ~~for~~ thickets
of *Premna*, *Glochidion*, *Acalypha*,
etc., with *Cocos* and *Artocarpus*03 *Hibiscus tiliaceus*
patches on slopes04 *Acalypha*
common in thickets

Udot I. - Fefan I.

tree 6 m. tall, leaves glossy.

tree 6 m. tall, badly
infested with scale.
- shrub ~~2 m.~~ 2 m. tall,
flowers white.
- heavy infestation.planted abundantly,
but numbers of these
cut by Japanese who planted
patches of sweet potatoes
and manihot. Many of the palms
had the tops broken off or
shattered, said to have been
cut by the Japanese to get the
cabbage. *Paspalum* provides
a good quick cover to cut down
erosion. It has almost taken
over the sweet potato patches.
- small tree 5 m. tall;
leaves dark green
above, glaucous beneath;
flowers clear pale yellow
with maroon center "sirifo"
- shrub 2-3 m. tall
"manon"

1946 Truk Is. (Caroline)

- 24505 *Premna obtusifolia* ^(det. G. S. Gentry)
common in thickets
- 06 *Elaeagnus* ^(det. G. S. Gentry)
~~disseminata~~ *viridis* - *gambusia* (det. G. S. Gentry)
moist open slopes

- 07 *Polygala*
common on open slopes
along trail

May 27 - Fepan I., Mt.

Chulachapp

small patch of native
forest on steep side of ridge
crest. *Calophyllum inophyllum*, *Ficus*

- 08 *C. inophyllum*
common

- 09 *Ficus*
several trees in small patch
- 10 *Canavalia* ^{*cathartica* Thunberg}
common vine in forest

- 11 *Glochidion*
occasional to common on ridge
and slopes, coming in after clearing

- 12 *Masariania*
common, coming in after clearing

- 13 *Derris*
common

- 14 *Cynometra*
one large tree seen

Fepan

shrub 3 m. tall.

— "nior umukau"
disease on *Pisonia batatas*.

flowers white, roots
with wintergreen odor.

sp. *Cynometra*
laced with *Canavalia*
~~and~~ *Merramia*, & *Columella*
vines.

vine climbing in trees;
flowers green "achekchen"
— large tree, sterile.
"au"

vine tangled in trees.
— undoubtedly more than
one plant represented in
collection. flower rose-pink
(only one seen eaten by a larva white
in press) "chochon"

— small tree; flowers
yellow "afor"

small tree, flowers
greenish "up"
— vine, climbing in trees,
leaves glaucous beneath,
dark green above; sterile,
"up"

tree 10 m. tall, leaves
glossy above. (ömmö)

May 27 - Mesa Village, Fefan I.
marshes back of beach,
slightly higher ground
back of this, and slopes
above.

74515 ~~Blechnum~~ *Blechnum orientale* L.
cavity in rock of road cut
16 *Ipomoea batatas* L.
along road

17 *Cyperus javanicus*
~~just~~ just above edge of marsh

17 *Phyllanthus niruri* Amarum Schum.
det. G. L. Webster
common weed.

19 *Sida rhombifolia* L.
common weed

20 *Urena lobata* L.

21 *Luffa cylindrica*
common weed

22 *Collococcus*
occasional in marshes

"nubung"

(wood specimen)

rhizome very short, erect,
75 m. young fronds rose-bronze.
vine creeping on ground.

75 m. flowers lavender, stems
petioles & maroon.
small dense tuft. leaves
slightly glaucous "moirai"
erect "negamani" "nekamani"

x Th.
1956

erect, 0.8 m. tall, flowers
yellow. "siunen"
flowers pink "noknok" (nogond)
vine, climbing over buildings,
bushes, etc. flowers
yellow. "morenof"
tree 12 m. tall, leaves
ascending, flower ~~ing~~
inflorescences ascending,
trunk hard toward outside,
firm but pithy within,
covered with small
incipient roots about
1 cm. long, above with
stubs of old inflorescences,
leaves with sheath
closed below (about 3 dm. 7
old infls. with mature
fruit below leaves.
leaf scars inconspicuous.

May 23 slopes of Mt. Tolomon

- 24523 cultivated slope
Alocasia macrorhiza
 small patch, cultivated
 on slightly moist ground,
 but not in water.

upper steep wooded ridges
 and slopes, decadent mist
 forest, with some large
 trees.

- 24 *Acalypha*
 thickets near lower edge
 of forest

- 25 *Hoya*
 near top of mountain on open
 ridge.

26

- near top of mt. on open ridge.
 27 *Procris pedunculata*
 common near top of mountain

erect stem 5 dm. tall,
 leaves up to 2 m., peduncles
 axillary, up to a dozen in
 various stages on one
 plant, each enclosed in
 2 linear bracts. spathe
 bronze purple with green
 base, ~~stamens faint~~
 upper part of spike yellow,
 middle part white,
 tessellate, lower part
 with greenish ovaries
 and white stigmas. "kia"

bush 1.5 m. tall (possibly
 extreme form of #24504),
 leaves fleshy
 veins tangled with other
 veins. flowers white
 - corona ~~thick~~ ^{fleshy pink}
 vine with yellow flowers.

~~common~~ fleshy herb
 "atataguri" (k)

- 24528 *Centotheca latifolia*
common
- 29 *Glochidion*
common
- 30 *Glochidion*
common
- 31 *Pothos*
common near top of mt
- 32 *Davallia*
shaded slope near top of mountain
- 33 *Pittosporum*
rare, near top of mt.
- 34 *Abrus precatorius*
valley slope
- 35 *Croton*
occasional - near top of mt.
- 36 *Melochia*
occasional in open places
- 37 *Macaranga*
occasional in forest, especially in openings
- 38 *Flagellaria indica*
occasional in bush or bushy woods on or near ridge top.
- 39 *Calophyllum inophyllum*
common in forest
- 40 *Randia carolinensis*
common in forest

"fetin" (applied to grass in general)

- small tree, flowers yellow, seeds red. (fls. & fruits from different trees)
- "amasés"
great vine climbing in trees, fruit green, "nga"
rhizome creeping among rocks. "weratu"
- small tree, inner bark with strong oily odor, flowers white "anepit"
vine, flowers purplish, seeds red with black eye. "kasis"
- bush 1.5 m. tall, flowers white, fragrant. "chem"
- shrub 4 m. tall, fls. pink "tup" (name also applied to *Macaranga*.)
- shrub 4 m. tall, fls. greenish. "tup" (name also applied to #24536)
- vine climbing in trees, fruit pink, thinly fleshy. "nigasi" (H)
- large tree. "regits" (H)
- small tree, 5 m. tall. "regits" "kisinom"

- 24541 Polypcias *grandifolia* Vahl.
~~on~~ semi open ridge

42 Glochidion

common in forest

43 Canavalia *microcarpa* cathartica

very common, especially in
 openings and around edges of forest

44 Fagraea *bertiana* var. *pygmaea* (Hook.) Tost.
 occasional in forest

45 Clerodendron

~~shrub 1.5 m. tall~~ near lower
 edge of forest

46 Ficus tinctoria

~~not~~ not common

47 Vittaria

on tree trunk near lower edge of
 forest.

48

on tree trunk

49 Polypodium scolopendria

on tree trunk near lower edge of forest

50 Peperomia

on rocks

51 Ficus prolixa

at bridge, open edge of forest

bush 1 m. tall, leaves
 very glossy, odor slightly
 oily.

small tree, flowers yellow
 "amasés"

Thomas

large vine, climbing over
 trees, flowers magenta.

tree 10 m. tall, buds
 and immature fruits,
 - fruits pendent "sour"
 - shrub 1.5 m. tall, buds
 white (flowering and fruiting
 twigs from different
 individuals in same thicket)
 "etin" and "abucts" - two names
 from same informant -
 mentioned the fact that there
 were two.

- small tree, sterile
 "avan" (awan)
 fronds leathery, arching.

"unen katu"

small form "chiji" (chichi)

plant fleshy, (lvs. alt.)

small tree 5 m. tall, sterile
 "an"

1944 - 7 mts Ia (Caroline)

- 24552 *Randia carolinensis*
common, this one near lower
edge of forest.
- 53 *Acallophyllus*
rare, lower edge of forest
- 54 *Piper*
common
- 55 *Lugenia ciceraria*
steep open slope below edge of
forest
- 56 *Ficus*
common in forest, this one at
lower edge

small tree, flowers white
"kisinom"

- shrub 2.5 m. tall, fls.
- greenish, fruit green.
- vine climbing on tree trunks
"eras"
- extensive vine with white
flowers. Introduced by
japanese. herbage foetid.
- large banyan tree, 10
m. tall, spreading, mass
of trunks 2-3 m. through
quite solid by anastomosis.
"an"

May 29 - Nomwin I. ~~wood~~.

Luxuriant forest of coconuts,
Artocarpus and other trees
with dense undergrowth
of Polypodium, Nephrolepis,
Wedelia and a number of
Crataeva speciosa

24557

- 58 Cordia subcordata
near beach
- 59 Guettarda speciosa
occasional, especially near beach
- 60 Cassytha filiformis
near beach, parasitic on various
plants
- 61 Terminalia ^{samoensis} ~~catappa~~
near beach
- 62 Cucurbita pepo
~~central~~ clearing
- 63 Fimbristylis cymosa var.
opening ~~beach~~, common
- 64 Digitaria ^{fruticosa} ~~fruticosa~~ ^{microbachne} ~~microbachne~~ ^{approx.}
opening, common
- 65 Thuarea involuta
opening, common
- 66 Pipturus ^{argenteus} ~~argenteus~~
occasional toward outer beach

shrubs, laced with Piper
and, especially around
edges, with Canavalia.

"informant" Abbas (Ab Kar)

shrub, flowers white
zygomorphic, petals on
one side larger. fruit
eaten when ripe. "apa" "apuchi"

shrub 3 m. tall (others
seen larger), flowers
bright orange. "anno"

wood used for outrigger booms.

shrub 3 m. tall (others
seen larger trees) "mosor"
wood used to carve bowls

leafless vine greenish-yellow,
flowers white, fruit green.

"ölan" used to line an oven of "um"
bushy tree, 3 m. tall. "sin"
wood used for paddles

extensive creeping vine,
leaves gray spotted, flowers
yellow. "pakin"

tufts, leaves soft. "puker"
used as stomach medicine"
tangled

prostrate ~~traces~~ with tips
ascending, forming a loose
mat.

shrub 2-3 m. tall, leaves
whitish beneath. "aroma" used for
fish line (inner bark)

- 2567 *Pipturus argenteus*
occasional toward outer beach
- 68 *Messerschmidia argentea* (L.) Johnston.
along outer beach
- 69 *Triumfetta procumbens* Forst.
along passage beach
- 70 *Ficus tinctoria*
occasional in forest
- 71 *Eugenia javanica*?
occasional in forest
- 72 *Polyphorus* *Trametes circinata* Berk.
on decaying log in forest.
- 73 *Leucobryum glaucum*
^{phorus}
on tree trunk near beach
- 74 *Hedyotis biflora*
on ground in forest in a spot
free of undergrowth
- 75 *Achyranthes indica aspera*
scattered especially along
trails and in openings

- "aroma"
shrub 3 m. tall, "apple" ^{apple}
leaves white beneath "apple" ^{apple}
- wood used for canoe construction
bush 3 m. tall, other
seen 6 m. fls. white, leaves
fleshy, silvery green. ^{carve bowls from wood.}
"amolest" "amolest"
stems prostrate with
branches ascending, fls.
yellow. "kumim"
- small tree, 5 m. tall; ^{large}
ripe fruit orange ^{cooked} very ^{and eaten.}
rarely fruiting. ^{adun}
- great tree 20 m. tall, 8 dm.
thick; more or less cauliflorous,
infls. both on trunk, limbs
and smaller branches, fls.
white. "faniaf" fruit eaten raw.
wood used for outrigger booms.
- "selingen anu" (devil's ear)
- pale green cushion
"lumen nu" (coconut moss)
- prostrate; leaves sub-fleshy,
white beneath; fls. white
"opuson"
- erect herb. "liko" may be pronounced
"ligo".

24576 *Callicarpa cardicans* (Burm. f.) H. & A.
rare, one seen in open woods
"apui" used for boom on model canoes.

77 *Tacca leontopodioides*
common especially in open places
found on all small islands.

78 *Morinda citrifolia* L.
common

79 *Guettarda speciosa*
occasional in forest

80 *Piper fragile*
very abundant

81 *Wedelia biflora*
abundant, one of principal
plants in undergrowth

82 *Glochidion* sp.
common in undergrowth

83 *Polypodium scolopendrium*
common, forming a large
part of undergrowth
on ground and climbing tree trunks

84 *Nephrolepis hirsutula*
most abundant plant
in undergrowth

shrub 3 m. long, fls. purple



scape erect, leaves
with 3 main divisions
"moke(u) mok" starch made from tubers
usually wild but sometimes planted.
shrub 2-3 m. tall,
fl. & fruit white. "nen"
(in Truk "aring" or "nobur").
fruit eaten in time of famine.
sucker shoot from tree
20 m. tall, 5 dm. thick.

vine on ground and
climbing on tree trunks,
sterile. leaves glossy.
"atukupui"
erect, 1-2 m. tall, fls.
yellow. "atuat"

shrub 1-3 m. tall, fls.
yellow, fruit green.
"efor" used for house rafters.

"chi(i) chi

fronds more or less
erect, spreading by stolons
"amere"

- 24585 *Scaevola* ^{peruviana} ~~frutescens~~
fringing the beaches, not
in forest
- 86 *Canavalia* ^{cathartica Thunberg} ~~micrantha~~
very common, especially near
beaches, ~~climbing~~
- 87 *Plumeria* ^{rubra L.}
cultivated ornamental
- 88 *Hernandia* ^{virgata Sw.} ~~virgata~~
cultivated ornamental
- 89 *Dioscorea bulbifera* L.
occasional in forest
- 90 *Alocasia macrorhiza*
very common both in
swampy land and about
houses in the village,
actually becoming weedy
- 91 *Artocarpus altilis*
forming a dense forest
in ~~center~~ of center of
island back of village,
elsewhere mixed with cocon.
- 92 *Amurcandia*
on rotting breadfruit log
- 93 *Eleusine indica* (L.) Gaertn.
one plant only seen on pier
- 94 *Fimbristylis cymosa* R.Br. var.
rare on sand spit (with 24597)

Nomwin Atoll

- shrub 1.5 m. tall,
rounded, spreading,
fls. white, fruits white,
fleshy. "nat"
vine, climbing over trees,
fls. rose pink. pods on
dead vines. "wal" leaves used
for medicine for stomach. Leds
from flowers.
- small tree "soin".
latex abundant, fls. yellow
and cream.
shrub 2 m. tall, leaves
glossy.
vine, sterile.
- plants all sizes, up
to 1.5 or more m. tall,
caulescent. "ka"
- great trees up to 25 m. tall
fruit rather small
and cylindrical.
- gelatinous, tough.
- tufts; leaves stiff

- 24595 *Euphorbia chamissonis* Benth.
common very locally on
sand spit.
- 96 *Portulaca* ^{*samoensis* v. Poellm.} ~~*quadrifida*~~
only one small plant seen
on sand spit.
- 97 *Fimbristylis cynosu* R.Br. var.
common on sand spit,
(with #24594).
- 98 *Thalassia hemprichii*
abundant in shallow water
of lagoon near shore
- 99 *Colocasia esculenta*
cultivated in trenches dug
down to water level in
forest.
- 24600 *Cyrtosperma* ^{*merkussi* (Huski.) Schott. DHN:lon 6/1998} ~~*chamissonis*~~
cultivated in trenches and
marshy places dug down to
water level.
- 01 *Pandanus tectorius*
common on ~~interior~~ outer
beach
- 02 *Musa sapientum*
planted in trenches in forest,
with aroids, not abundant.
- 03 *Soulamea amara* Lam.
common locally on broken
coral near outer beach

- plant spreading-ascending,
lactiferous, sub-fleshy,
~~leaf~~ leaves whitish beneath,
fls. greenish, slightly sticky.
"not".
- plant prostrate, leaves
fleshy, flower yellow, 1.5 cm.
across.
- tufts, leaves stiff.
- rhizomes and leaf bases white.
- sterile; petioles green, other
plants seen with reddish
petioles.
- plants up to 2 m. tall,
prickliness variable
(leaves from different plants).
- pyramidal tree 6 m. tall
fruits from ground beneath.
(a much longer leaved form
planted in interior, used
for weaving mats.
- plant about 2 m. tall,
young
- shrubs 2-3 m. tall

24604 *Crataeva speciosa*

common, especially in village

05 *Terminalia catappa* ~~catappa~~ *samoensis* Rech.

rare, near outer beach

06 *Calophyllum inophyllum*

occasional, this one near inner beach.

07 *Digitaria pruriens* var. *microbachne* approaching

common near inner beach

08 *Lepturus repens* var. *subulatus*

common to occasional near inner beach

Island flat, no trace of raised coral. mostly sandy except for outer beach and a narrow strip in from it, which are of broken coral.

The central part of the island is occupied by a dense forest of great breadfruit trees, up to 20 or 25 m. tall. Where this breadfruit is thickest, the undergrowth is rather sparse, but toward periphery the breadfruit becomes mixed with coconut and not so dense. Here the undergrowth of *Nephrolepis*, *Polypodium*, *Wadelia*, *Piper* becomes very dense and 1-1.5 m. deep, with common shrubs of *Glochidion*, *Ficus tinctorius*, *Morinda citrifolia*, *Eugenia*, etc.. Toward the outer beach *Pandanus*, *Cordia*,

Guettarda
speciosa

fl. white.

small tree 4 m. tall,

flowers white.

small, sterile tree 6 m. tall.

normin

creeping

Pipturus, *Messerschmidia*, *Terminalia* and #24603 become common. *Scaevola* forms a dense fringe around the outer and passage beaches, growing to a height of 3 or 4 meters.

In small openings and clearings *Fimbristylis*, *Digitaria*, *Thuarea*, and *Lepturus* cover the ground. In open places very near the beach *Triumfetta* is common, *Fimbristylis* is more common than inland, and *Cassytha* is common, strangling everything from grasses to small trees.

On a sand spit running out along the reef *Scaevola* and *Messerschmidia* are the dominant plants, forming an open bush, while two

Especially toward the beach
Camorabit sp. is abundant and
thinner the trees and shrubs.

forms of *Fimbristylis cynosu*, *Euphorbia* sp. are common in the intervals. Here a single plant of *Portulaca quadrifida* and a small sterile seedling of *Ipomoea pes-caprae* were seen.

Tacca, *Dioscorea*, and one or two sterile *Ipomoeas* are scattered over the island. The *Tacca* is used to make starch and, though usually growing wild, is occasionally deliberately planted. It was not seen on the beach.

Around the village and scattered houses the most conspicuous plant besides *Cocos*, is *Crataeva*, which is planted everywhere to furnish fruits for food. Hedges are made up of a *Hibiscus* (rosa-sinensis or a hybrid), and a sterile *Polypodium* with finely cut leaves. *Plumeria* is occasional, as is a large *Crinum* (both a white and a red form growing together). *Alocasia macrorhiza* is common everywhere about the village, even becoming weedy and growing in much reduced form along paths. *Pandanus* is occasional, but was all sterile.

Toward the interior a series of excavations have been made and filled with organic matter, forming a peaty ^{Here} ~~muske~~ ^{and at least 2 forms of} *Cyrtosperma*, *Colocasia*, are grown, with *Alocasia* and *Musa* on the slightly higher but wet ground around them.

The *Antiaris* is quite variable in leaf outline and fruit shape, size, and surface. Pelzer and Elbert got names of a dozen or more varieties. I had no time to make any attempt to study them.

The *Pandanus* observed growing commonly ~~along~~ ^{along} the outer beach (#24601) is a short leaved small fruited form. Inland a *Pandanus* is commonly planted, apparently for mat-weaving, which, perhaps because of habitat, is much more luxuriant and longer leaved. It was all single erect stems about 1-1.5 m. tall.

Cucurbita pepo was occasionally cultivated but did not appear to fruit much.

Obviously *Cocos nucifera* and ~~*Artocarpus*~~ *Artocarpus altilis* are the important food plants. *Alocasia* and *Cyrtosperma* and *Tacca* are also important. *Crataeva*, *Canis*, *Pandanus*, *Eugenia*, *Ficus*, and *Morinda* furnish fruits that are eaten. *Colocasia* is a food plant, but was not seen in any great abundance. *Cucurbita* is not abundant. Judging by the size of the *Musa* plants, they have not been cultivated for any length of time yet and must be in a more or less experimental stage. It was not discovered whether or not the *Dioscorea* is eaten. *Solanum batatas* ~~is~~ very sparingly planted but obviously does not thrive.

The wood of *Glochidion* is used for house rafters, that of *Artocarpus* for general construction and apparently canoe hulls, that of *Eugenia* ^{and *Cordia*} for outrigger booms, that of *Messerschmidia* for carved bowls, diving goggles and canoe connectives, that of *Terminalia catappa* for paddles, and that of *Guettarda* for carved bowls.

The inner bark of *Pipturus* is used for fish lines.

Pandanus leaves are used for weaving mats.

Coconut leaves are used for house coverings, rough baskets, young leaves for fans and hats, etc.

Canavalia and *Fimbristylis* are said to be used as medicines for stomach ailments.

Cassytha filiformis is said to be used to line ovens.

Leis are made from *Canavalia* flowers and *Plumeria* flowers are worn in the ear by young people to indicate that they are thinking of the opposite sex.

The Truk Archipelago is extremely varied in topography, soil and underlying rock. It is an enormous barrier reef with a number of motus. Inside are numerous islands of all sizes, from high mountainous rugged ones to small flat coral islands.

On the volcanic islands parts are underlain by deeply weathered tuff, part by hard flow lava. Some have the lower terraces of coral rubble. Great talus slopes have accumulated at the foot of the basaltic cliffs on such islands as ~~the tuff, especially~~ Toland and Dublin. This has become weathered in most places.

The tuff, especially, has weathered into a dark red-brown sticky soil with a high colloidal content, as evidenced by cracking when it dries out.

The high islands were obviously once forested. Now only remnants of this forest persist on the highest peaks and high steep slopes on a few of the larger islands, as Tol (best), Dublin, Tapan, Moen. Important trees in this are *Cynometra*, *Ficus* (tinctoria and sp. #24556), *Calophyllum inophyllum*, *Randia carolinensis*, #24463, a ptychospermate palm, *Glochidion*, *Macaranga*, *Fagraea*, several *Araliaceae*, and several others. ~~trees~~ shrubs, as *Psychotria* (24456, 24457), *Acalypha*, *Pipturus* (24464, 24467), *Clerodendron* (24545), *Allophyllus* (24553), are reasonably common. *Cratogeomys* (24535), *Pittosporum*, *Psychotria* (24460), etc. are rare. On the ground, at least along trails,

Geocardia herbacea and *Centotheca latifolia* are common, the latter making up much of the ground cover, along with several ferns. *Piper* (2 sp.), *Columella* (?), *Ipomoea* sp. (24418), *Merremia*, and, in places, *Canavalia* are common vines, but, perhaps with the exception of the *Pipers* and *Columella* may be invaders from below where the forest has been damaged. *Pothos* (?) (24531) is occasional as a liana climbing in trees. ~~This forest was not seen~~

This forest was not seen anywhere below about 200 m. and varied in composition, but not much in aspect, from place to place. The higher portions are true montane rain-forest, with leaf epiphytes abundant. Trunk epiphytes, mostly *Polypodium*, *Vittaria*, etc. are common throughout.

Something similar to this may well have been the natural vegetation from the foot of the slopes up to 200 m., as in places ~~higher~~ where the forest was destroyed or damaged, the plants that tend to come back are those commonly found on the lower slopes. Here the natural forest has been

completely destroyed, probably for a long time, and replaced by a forest-like cover of *Cocos* and *Artocarpus*, with various subsidiary shrubs and small trees and a ground cover of grasses and ferns. *Aplismene*, *Cestotheca*, *Raphanolepis*, etc. are common in this.

Many weeds are abundant. These have been much encouraged by the cutting of considerable areas of the breadfruit and coconut during the war by the Japanese. *Paspalum dilatatum* ^{serotinum}, *conjugatum*, ~~and~~, *orbiculare*, *Emilia sonchifolia*, *Sida acuta*, *Ageratum conyzoides* and many other weeds are common. *Ipomoea* sp. (24418), *Merremia*, *Canavalia*, etc. cover large areas. In some open places small bracts of *Miscanthus japonicus* are found, but not as abundant as might be expected.

The aggressive secondary shrubs or small trees that tend to come in here are *Glochidion*, *Acalypha*, *Macaranga*, 2 *Stereuliaceae*, *Morinda citrifolia*, etc.

In the openings cleared

by the Japanese every available square foot was planted to sweet potatoes and manihot. The natives are neglecting these, especially the sweet potatoes now and grass is taking possession, growing very luxuriantly.

Mangifera indica is scattered here and there, as are thickets of *Hibiscus tiliaceus*. Shrubs and vines follow and already the Japanese trails are so overgrown that they cannot be used. Erosion does not long remain a serious problem, as the growth is very heavy.

The terrace at the foot of the slope is usually little above sea level. In most places it is fringed with typical mangrove swamp, with 2 sp. of *Bruguiera*.

Rhizophora mucronata, *Sonneratia caseolaris*, ~~Excoecaria~~ *agallocha*, and two other trees very common. *Rhizophora* usually dominant, *Acrostichum aureum* common, also *Clerodendron* sp.

Back of this is land that is occupied by houses, door-yard cultivation such as citrus

Aurantifolia, bread-fruit, coconut, *Alorasia*, ~~etc.~~ *Carica*, manihot.

Here also are fresh or brackish marshes with great masses of *Scleria*, ^{pusillifolia} etc. and where *Colocasia* and *Cyrtosperma* are cultivated. *Ipomoea reptans* is common here, said to have been introduced by the Japanese. It is eaten as greens. A large grass occupies great areas of marsh or moor. In more brackish areas *Paspalum vaginatum* forms pure stands. ^{*Cyperus pennisetoides* common}

Along tidal channels into these marshes are thickets of *Barringtonia racemosa* and *Nipa fruticans*.

Spontaneous trees and shrubs are *Mangifera*, *Morinda*, *Hernandia*, *Hibiscus tiliaceus*, *Thecspesia*, *Pandanus*, etc. *Ceiba* and *Casuarina* appear to be planted.

Some of the common tropical cultivated plants are raised in dooryards as ornamentals - *Hibiscus rosa-sinensis*, *Allamanda*, *Lantana*, *Polyscias* (2 sp.), *Euphorbia heterophylla*.

Weeds are the most obvious part of the vegetation - *Eleusine indica*, *Jussiaea suffruticosa*, *Arena lobata*, *Sida acuta*, *Euphorbia cylindrica*, *Cenchrus echinatus*.

Vigna marina in places covers large areas. Just below headquarters it has spread up the lowermost slopes and is covering some of the bare scars of bulldozer activity, preventing erosion.

Missing

24609-24669

Tree
Moan
Pis

24690, 91

Pungo?

4
24609

erolines)

d main
oken, Moen?
9 Mt.)d fruit and
of it cleared
sweet potatoes
h overgrown
clum con-
robiculation(?)
) Scleria sp.)poricus
vines ofence (Kaneh.) Mleff.
oods on ridge

- 10 *Randia carolinensis*
common in woods on high ridge

- 11 *Ficus*
common in woods on high ridge,
this specimen, at least, a
strangler, growing around a
Schefflera

- 12 *Schefflera braconeri* Harms
occasional in woods on high ridge

- 13 *Digitaria*
abundant on upper open slopes

Moan ?

main ridge with
patches of original
forest alternating with
cleared places, these
on more or less level
places. Forest of *Ficus*,
Cynometra, *Schefflera*, etc.,
quite wet, trees large

Tree 8 m. tall, 2.5 dm. thick,
wood rather hard, fruits
pale green, skeletons of
old tree persisting in whole tree.
— shrub 3 m. tall; flower
white, odorless, fruits not
mature.
— large tree, with a mass of
trunks; fruit pinkish.

fairly large tree, being
strangled by *Ficus*, about
8-10 spikes at summit
of branch, flowers
white, fruit green.
— tangled culms forming a
heavy ground cover.

June 2 - slopes and main
ridge of Mt. Teroken, Moenl.
(Chukumung Mt.)

slopes with breadfruit and
coconut, much of it cleared
and planted to sweet potatoes
now very much overgrown
by grasses - *Paspalum con-*
jugatum and *P. serotum* (?),
Digitaria sp. (), *Scleria* sp.,
Miscanthus japonicus
forming thickets, vines of
Messerschmidia, etc.

75609 *Astronidium carolinense* (Kaneh.) M. K. Hoff.
occasional in woods on ridge

10 *Randia carolinensis*
common in woods on high ridge

11 *Ficus*
common in woods on high ridge,
this specimen, at least, a
strangler, growing around a
Schefflera

12 *Schefflera* *lanceolata* Harms
occasional in woods on high ridge

13 *Digitaria*
abundant on upper open slopes

main ridge with
patches of original
forest alternating with
cleared places, these
on more or less level
places. Forest of *Ficus*,
Cynometra, *Schefflera*, etc.,
quite wet, trees large.

Tree 3 m. tall, 2.5 dm. thick,
wood rather hard, fruits
pale green, skeletons of
old trees persisting in whole tree.
shrub 3 m. tall; flower
white, odorless, fruits not
mature.
large tree, with a mass of
trunks; fruit pinkish.

fairly large tree, being
strangled by *Ficus*, about
3-10 spikes at summit
of branch, flowers
white, fruit green.
tangled culms forming a
heavy ground cover.

20

June 3 - Pis I., north side of
Truk Cairns Reef.

flat coral island with a little
slightly raised coral at west end,
completely wooded, mostly
with *Cocos* and *Artocarpus*.
rocky toward outer beach,
sandy over most of island,
large depressions filled with
muck in interior where
Cyrtosperma is raised extensively.
General undergrowth of
ferns and *Wedelia*, grass
in openings.

24614 *Ximenesia americana* L.
rare, at top of outer beach

15 ~~*Calophyllum*~~ *Terminalia*
occasional around beaches

16 ~~*Calophyllum*~~ *Pongia* *Ochrocarpos odoratus* (Raf.) Merr.
rare, no plant seen

17 *Scaevola frutescens* (Mill.) Kr.
common, fringing outer
and passage beaches

18 *Fremontia*
occasional, common on outer beach

19 *Triumfetta procumbens*
occasional on beaches,
shaded.

20 *Cordia subcordata* Lam
along beaches, especially inner one,
near houses.

Cucurbita pepo = "pakim"
Carica papaya = "kifan"

bush, 1.5 m. tall, rounded,
weakly spiny, leaves
thick, yellow-green;
flowers yellow within,
green without. "anno" or "ano"
- shrub 2 m. tall, leaves
leathery, flowers white
"sin"

Raf. Merr. shrub 1.5 m. tall, sterile.
"atit" "nanin"
rounded shrub 3 m. tall,
flowers white. "not"

caespitose tufts, leaves
not especially stiff. "poker"
- stems prostrate, branches
erect; fls. yellow. "kimin"

tree 6 m. tall, rounded; flowers
orange, fragrant. "anikat"

- 24621 *Cassytha filiformis* L.
common on outer beach,
parasitic on various low plants.
- 22 *Cinnam*
commonly cultivated
- 23 *Glochidion*
occasional in undergrowth
- 24 *Ipomoea macrothyrsa* Cass. Hamu
rare, cultivated as ornamental
- 25 *Rhoeo discolor*
persisting after cultivation
- 26 *Eragrostis amabilis*
weedy sandy places near
inner beach.
- 27 *Eleusine indica* (L.) Gaertn.
weedy sandy places near
inner beach.
- 28 *Digitaria pruriens* var. *microbachne*
common in open sandy
places, especially near
inner beach
- 29 *Portulaca quadrifida*
common in weedy places
outside of forest, along road
- 30 *Soulamea amara* Lam.
common along outer beach on
rock

- leafless, stems yellow-
green, flowers white,
fruit green. "tita"
- plant 1 m. tall, fls. white
(red flowered form also grown
with it). filaments purple.
peduncles slightly compressed
"sip"
- shrub 1.5 m. tall,
fl. yellow. "tita" "tita"
- shrub 2.5 m. tall, inf.
dull red, flowers scarlet.
"atin"
under sides of leaves
and bracts maroon-purple.
said to have been introduced
by Japanees. leaves fleshy, brittle.
- spreading tufts.

tufts.

covering ground.

- prostrate, flowers yellow.
root enlarged, plant
fleshy, leaves in flat
masses. "chinkis"
- shrubs 2 m. tall, flowers
whitish, fruit green.
"maras"

- 24631 *Plumeria rubra* L.
cultivated sparingly

32

large beds in shallow water on fringing reef in lagoon, almost exposed at low tide.

33

- Polypodium grandifolium* Vahl.
shade, especially in edge of forest.

34

- Ipomoea alba* L.
edge of forest near outer beach

35

- Oplismenus compositus*
common in forest, carpeting ground

36

- Ipomoea littoralis* Bl.
occasional in woods

37

- Dioscorea bulbifera*
common in woods

38

- Achyranthes aspera*
rare in woods along trail

39

- Hymenocallis littoralis*
rare in small clearing

40

- Paspalum conjugatum*
common along trails and in slight openings in woods

small tree 4 m. tall, very lactiferous. flowers fragrant, cream and yellow.
"seur"

succulent, rhizome white, leaves distichous.
"muchamuch" or "anot"

with celery odor when broken
shrubs less than 2 m. tall, fruiting when less than 1 m. inflorescence very lax. "atenichen"
- vine climbing over shrubs
"afamach"

prostrate to ascending, loose

sterile vine "muke" or "muge"

vine climbing on shrubs and trees, sterile, tubers eaten by natives. "apureka"

erect herb 1 m. tall.
"nikohu"

flowers white, peduncle compressed, with sharp edges. "sip"
- spreading by runners, forming a dense growth.

- 24641 *Wedelia biflora*
one of dominants in undergrowth
- 42 *Artocarpus altilis*
about dwellings
- 43 *Bruguiera*
in marshes on the landward
side of the road on passage
beach.
- 44 *Asplenium nidus*
on coconut stumps, rare
- 45 *Pennisetum obtusifolium* (L.) Ga. (white leaves)
edge of forest, near dwellings
- 46 *Clerodendron*
small marshy places
- 47 *Flourea*
on coral boulders and along
road
- 48 *Quettarda speciosa*
occasional along beaches
- 49 *Dryopteris gozzilodius*
seen only in much
soil in Cyrtospermum patch
- 50 *Nicotiana glauca* L.
cultivated around dwellings,
a few plants at a time
- 51 *Polyporus sanguineus* L. ex Fr.
on old rotting post
- 52 *Schizophyllum commune* Fr.
on old rotting post

- erect herb 1 m. tall "atnot"
flowers yellow
- tree 10 m. tall, fruit
immature, seed bearing.
variety "mai" or "neai"
- small tree 3-4 m. tall
calyx green, petals dull
orange. "ong"
- small plants, not
especially thriving "nuka"
- shrub 4 m. tall "umukrai"
- scrambling shrub,
forming low thicket,
corolla white, stamens purple.
"apuech"
- stems red, fleshy, petioles
and cyms red. "anifitun"
- shrub 2 m. tall "mosoi"
- all plants examined were
sterile. "amare"
- herb 1 m. tall, flowers
pink "suba"
- color orange-red, deeper below.
"seringen ane"
- color dull white

- 24653 *Crataeva speciosa* Volk.
religiosa
sparingly cultivated "
- 54 *Pittosporum*
sparingly cultivated around
houses, said to have come from
Pis I., not from higher islands.
- 55 *Messerschmidia argentea*
common along outer and passage
beaches
- 56 *Hernandia ~~peltata~~ ovigera*
one plant seen along ~~west~~ beach
- 57 *Vigna marina*
common near beaches
"
- 58 *Hedyotis biflora*
common in disturbed places
- 59 *Lepturus repens* (Forst.)
occasional near outer
and passage beaches
- 60 *Derris trifoliata*
common in edge of forest
and around eroded coral
boulders near ~~pass~~ west beach
- 61 *Ficus tinctoria*
occasional in forest
- 62 *Callicarpa*
rare in edge of forest at
west end

- shrub 2-3 m. tall, sterile.
"apuch"
small shrub 1.5 m. tall,
inner bark with an oily
aromatic odor, said to be used
- to rub on hair. "avenges"
small tree, leaves fleshy,
silvery green, flowers white,
somewhat fragrant. "chen"
small sterile bush 2 m.
tall, leaves somewhat
fleshy. "akurang"
prostrate, carpeting
ground, peduncles
erect, flowers yellow,
- keel straight. "nönukra"
prostrate; leaves sub-fleshy,
pale beneath; flowers
white, tube swollen, lobes
divergent. "sing"
spreading by runners

leathery leaved vine,
leaves glossy, dark
green, unipinnate and
tripinnate on same plant.
"unripot"

- shrub 2 m. tall, sterile
- "anan"
shrub 2 m. tall "kota"

724663 *Morinda citrifolia*

common

64 *Pisonia grandis*

rare on west end

65 *Canavalia microcarpa* ^{ca. *hartica* Thunberg}

occasional on west end
and in edges of forest

66 *Pemphis acidula*

common on eroded coral
blocks at west end

67 *Terminalia catappa* L.

one seen, near habitation

68 *Vernonia cinerea*

occasional in disturbed places

69 *Euphorbia prostrata*

common around village

70 *Physalis*

rare in disturbed ground

71 *Euphorbia hirta*

occasional in sandy place
among dwellings

72 *Phyllanthus ~~rostratus~~* ^{*amarus* Schumacher & Th. det. G. L. Webster 1955}

common in weedy places

73 *Gomphrena globosa*

cultivated (rare)

74 *Mirabilis jalapa* L.

cultivated (rare)

75 *Cyperus javanicus*

occasional

76 *Stachytarpheta*

rare in weedy places

shrub 2 m. tall

"nobui"

seedling, no large
plants seen. "noli"

large vine, flowers
rose pink "onuka" "onuka"

small trees, flowers

white (mostly fruiting)
younger leaves thin, astringent & taste
older ones fleshy, salty-astringent. "engi"

shrub 3 m. tall, flowers

white "asar"

flowers purplish.

prostrate, stems red.

"kichi"

flowers pale yellow

with maroon center "tomato"

plant purplish

erect (others seen much
taller)

heads magenta

bushy herb 4 dm. tall

"meribira"

caespitose, bracts
exceedingly long (other
plants seen smaller)

"nikanun"

herb 0.7 m. tall, flowers
deep purple-blue

"sagura"

- 24677 *Psilotum nudum*
rare at base of coconut trees
in edge of forest
- 78 *Nephrolepis*
abundant in undergrowth
- 79
common in undergrowth
- 80 *Acalypha*
common in undergrowth
especially toward
inner beach
- 81 ~~*Marisma*~~ *granularis*
common near inner beach
- 82 *Thuarea involuta*
common in open or semi
open places
- 83 *Calophyllum inophyllum*
occasional along beaches
- 84 *Thespesia populnea*
rare along beach
- 85 *Centella asiatica*
common along inner beach
in village
- 86 *Polypodium scolopendrium*
common everywhere in
undergrowth and climbing
on tree trunks and stumps
- 87 *Cordyline terminalis*
rare around village

caespitose

spreading by slender stolons,
fronds erect "amäre"

main stems decumbent,
branches erect, flowers
small, white, hidden
by bracts "erion"

shrub 0.5-1.5 m. tall,
mostly single stems
rarely or sparsely
branched, ~~very~~ stylized
red. Specimens from
- a number of plants
prostrate "manon"

~~petiole~~ ~~siapi~~ "fetin niap"
prostrate, forming
mats "fetin"

small tree 7 m. tall
"rekit"

small tree, sterile
"pörö"

prostrate "nikolokot"

"chichi"

shrub 2 m. tall "tin"

244638

Piper fragile Benth.

det. J. H. S. 1955

everywhere in forest

89

Carriingtonia asiatica

rare around village

90

on rotting log

June 4 - Moen I., saddle bet.
Mt. Teroken and Mt. Tonaachan

91

on rotting stump partly covered
with earth.

The coral island flora, as exemplified by Pis I. is rich, compared with many such islands. The rainfall is so high that a tall forest of *Cocos* and *Artocarpus* is supported, with deep undergrowth of *Wedelia*, *Acalypha*, *Nephrolepis*, *Polypodium*, *Polyscias*, and with deep grass - *Paspalum conjugatum*, *Digitaria*, etc. in disturbed places. In the undergrowth shrubs of *Ficus tinctoria*, *Glochidion*, *Morinda*, etc. are occasional. Extensive low areas, even several acres, possibly artificial, are filled with deep soft mud. Here *Cyrtosperma* is abundant.

On raised limestone, of which there is little on Pis, *Pemphis acidula* grows to small

Piper is
common
on tree
trunks.

vine covering tree-trunks
and on ground. "ines"sterile small tree
"kum"

"seingen anu"

glows in darkness with a
strong green light.

tree size. *Scaevola*, *Lepturus*, *Messerschmidia*, etc. are only found on the extreme edges, at the top of the beach, especially on the outer beach, which has a strip of ~~trees~~ *Messerschmidia*, *Pandanus*, *Soulairea*, etc. fringed with *Scaevola*. *Ipomoea alba* is ~~very common~~ *Vigna* ~~sp.~~ *Canavalia*, ~~found sparingly here~~, also *Canavalia*. *Vigna mamea* covers some of the open land, with *Triumfetta*, *Cassytha*, *Thouarea*, etc.

Principal ~~food~~ food plants are *Cocos*, *Artocarpus*, *Cyrtosperma*, with *Musa*, *Crataeva*, *Pandanus*, *Ipomoea batatas*.

Tobacco is sparingly cultivated.

Ornamentals are *Crinum* (2 forms - white & red), *Hymenocallis*, *Polyscias* sp., *Plumeria*, *Gomphrena globosa*, *Mirabilis*, etc.

Trees around the village are *Cordia subcordata*, *Theophrasta*, *Hernandia*, *Terminalia* sp., *Pittosporum*, *Coccoloba*, *Artocarpus*.

A slight development of mangrove formation is evidenced by a few *Rhizophora* and *Bruquiera* trees.

The relatively richer flora of Pis than Norwin may well be a reflection of the nearness of high islands. *Acalypha*, *Pittosporum*, *Cordyline*, *Oplismenus*, *Rhizophora*, *Bruquiera*, *Dryopteris*, *Psilotum*, *Derris*, *Vigna*, *Manisuris*, etc. and many weeds may be evidence of this. Both natural means and frequency of human transportation are probably involved in this.

June 5 - flats near Baker Dock
Moan I.

Broad flat of somewhat raised coral gravel. Openings weedy, with Eleusine, several Euphorbias, Digitaria, Paspalum conjugatum, Ipomoea, Piper, Fimbristylis, Sida acuta, etc.

Mangrove swamp occupies a portion of this, mostly Rhizophora but considerable Sonneratia, some Bruguiera, Excoecaria, Scaevola, Luminitzera, Allophylus, etc.

One part has large Artocarpus

24692 *Ipomoea* ^{leaves red}
very common on sandy flats
and at edge of mangrove swamp

93 *Fimbristylis*
roadway of coral across
mangrove swamp

94 *Glochidion*
occasional on coral flat

95 *Carica papaya*
common coral flat

with vines - Piper, Ipomoea,
Wedelia (!) climbing up
trunks, some Pandanus,
2 sp. *Glochidion*, etc.

Tacca is occasional.
Cyperus sp., large grass,
sterile *Miscanthus japonicus*.

herbaceous vine, on ground
and climbing over bushes,
flowers still open at 10 a.m.
bright rose-purple, deeper
in center.
caespitose, leaves only
somewhat stiff.

small tree, fruit with
base of style enlarged,
dark green; fls. yellow.
erect dioecious plant,
single stem with crown
of large leaves, flowers
white, this tree male. Fruits
seen on others all very small,
5 cm. diam. spherical.

24696 *Glochidion*

occasional on coral flat

97 *Piper*common climbing on tree
trunks on coral flats98 *Wedelia biflora*common climbing on tree
trunks on coral flats99 *Phragmites laevis*very abundant in open
coral flats in wet places24700 *Sida acuta*

common weed on coral flat

01 *Cyperus*

coral road in mangrove swamp

02 *Thuarea involuta*

common on open coral flat

03 *Tacca leontopodioides* L.common climbing on old
coconut stumps on open coral
flat. scattered on coral
flat.04 *Piper*common climbing on old
coconut stumps on open
coral flat.05 *Digitaria pruriens* var. *microbachne*

occasional on open coral flat

06

mangrove swamp on coral mud

07

mangrove swamp, edge

small tree, fruit
pale green without
enlarged dark green style
base.leaves dark green, stiff
spike crimson. Plant
with slightly peppery odor.
vine-like, elongate,
flowers yellow.great masses 2 m. or more
deep.fls. orange yellow,
plant up to 0.8 m. tall.
small tuft.~~vine, leaves chlorotic.~~acaulescent, scape
up to 1 m. tall, leaves
2/3 as tall, linear, bracts
purple, fls. green.
vine, leaves somewhat
chlorotic.

approaching sea pines

small tree, fls. white.

vine climbing in bushes
and trees.

140 1946 Truk Is. (Caroline)

- 4708 *Barringtonia asiatica* L.
mangrove swamp or coral sand
09 *Allophylus*
edges of mangrove swamp
10 *Ficus tinctoria* Forst
edges of mangrove swamp

Moorea?

141

tree 6 m. tall.

shrub 2.5 m. tall,
fls. white; fruit scarlet,
double.
small tree, ripe fruit
bright orange.

June 8, 1946 - Mt. Lasso, n. central
Tinian I. 500 ft.

remnants of old forest
persisting on dissected coral
limestone around house

24711 *Taeniophyllum mariannense*
epiphytic on *Cynometra* trees.

12 *Cynometra ramiflora* L.
commonest tree

13 *Pipturus argenteus*

June 8, 1946 - "Palm Beach", west
central coast of Tinian I.

near top of limestone sea cliffs

14 *Hedyotis foetida* var. *mariannensis*
rock ledges

15 *Phyllanthus marianus*

June 8, - Lake Hagoya,
northern end of Tinian I.,
abandoned cultivated ~~about~~ ~~area~~
ground

16 *Amaranthus viridis*
hard trampled ground

17 *Lesbania cannabina*

stuck flat to bark, fruit
- green, peduncle thick.
Tree 3 m. tall with
buttressed trunk 3 dm.
thick, leaves glossy
- dark green.
small tree 3 m. tall,
ripe fruit white, fleshy,
leaves relatively smooth
above.

sub-shrub up to 1 m. tall,
with foetid odor when broken,
flowers white, corolla
- funnelform, lobes erect.
shrub up to 0.7 dm. tall,
leaves sensitive, whole
branchlets of them closing
up when put in press.

prostrate

erect slender herbs 2 m. tall, leaves
somewhat sensitive, flowers yellow.

~~was~~ June 8 - south end of
Tinian I., 250 ft.

limestone terrace

24713

~~Canthium~~
thickets

✓ 19 ~~Blachia~~ *Blachia marianensis* (A.D.C.) Kady.
thickets

✓ 20 *Jasminum marianum* DC.
thickets

✓ 21 *Psychotria marana*
thickets

✓ 22 *Eugenia palumbis* Merr.
thickets

June 8 - plateau 1 mi. n. of
Tinian, Tinian I. 250 ft.
cultivated in garden

✓ 23 *Graptophyllum pictum*

✓ 24 *Pseuderanthemum atropurpureum*

shrub 1-2 m. tall, scrambling,
immature fruit dull
pinkish.

shrub 2 m. tall,
somewhat lactiferous;
buds green.
- scrambling shrub.

shrub 1 m. tall, flowers
white, fruit red.
stipules ovate, not
- calyptate.

low shrub 0.5 m. tall,
fruit red when ripe.

bush 1 m. tall, leaves
with irregular white
centers. some twigs
with leaves green; flowers
purple.

shrub 1.5 m. tall, leaves
deep irregular bronze-
purple; corollas with
one erect, & horizontal and
one downward-pointing lobe,
pink, closely speckled
with deep pink.

June 3. - Camp Churo, near
center of Tinian I. 100 m.
roadsides and cultivated ground.

24725

rust on *Euphorbia prostrata*

✓ 26 *Bauhinia monandra*
cultivated ornamental

✓ 27 *Cassia glauca*
cultivated ornamental

✓ 28 *Zoysia matrella* *terrestris* Trin.
cultivated as lawn

June 9 same

✓ 29 *Amaranthus viridis*
near buildings, occasional

✓ 30 *Amaranthus spinosus*
near buildings, common

June 9 near Marpo Wells,
Tinian I.

abandoned cultivated land,
in and around large sink-hole.

✓ 31 *Ficus munda* var.
roadside

✓ 32 *Phragmites* *lurida*
deep ~~grass~~ ^{reed} lake in bottom
of sink-hole

✓ 33 *Pennis elliptica*
around bases of trees in
sink hole.

causing the normally
prostrate host to grow
erect.

shrub 2 m. tall; flowers
pink, lower petal
conspicuously spotted
with red.

small tree 3 m. tall,
leaves slightly glaucous,
flowers yellow.
forming a dense soft
carpet, not pungent.

erect herb, branching

erect herb 1 m. tall, stem
fleshy, branching.

banyan-type of *Ficus*, dense
rounded top. figs green.
canes 2-3 m. tall.

sterile woody vine;
leaves glaucous beneath.

June 8-13. Tinian Island is composed of a series of elevated terraces of reef limestone, representing at least 4 levels of elevation, separated by lines of cliffs. The surfaces of these terraces or benches are covered by soils varying in color and thickness from level to level. Some faulting has obviously taken place, resulting in slightly tilted terraces and several apparent levels that probably do not represent still-stands in the history of the elevation of the island. There are several large limestone sinkholes, so old as to be now merely small valleys with no outside drainage. One has a small lake. There is at least one small basalt outcrop, overlain by limestone, at Marps or Carolina Ridge. This is so small that it probably has no influence on the vegetation.

The edges of the terraces above the sea cliffs and bluffs in many places have lost their soil, or

never had any, and are bare, rough, usually more or less dissected coral limestone. There are few beaches of any size on the island.

No trace ^{remaining} of the ^{original} vegetation on the terraces, except where there are outcroppings of dissected limestone. The Japanese placed every square meter of land with enough soil into sugarcane and napier grass and ~~the~~ sweet potatoes. Later the U.S. agencies farmed some of this land quite intensively. Now it has been abandoned for periods of upward of 7 1/2 months. A vigorous weed vegetation has developed, so much so that it is hard to believe that such a short period has elapsed since the land was intensively cultivated. The most obvious and generally distributed plants are *Paspalum conjugatum*, two sp. of *Lida*, *Malvaceae* ~~sp.~~ *coronandellia*, *Crotalaria saltiana*, *Euphorbia hirta* (a very coarse and luxuriant form), *E. thymifolia* and another prostrate sp. (det. N. 192)

24734 *Jussiaea Ludwigia octovalvis*
bottom of sink hole

✓ 35 *Scheuchzeria mariannensis* (A. DC.) Kuhn.
coral limestone

36

coral limestone

✓ 37 *Pisonia grandis* R.Br.
coral limestone

✓ 38 *Mucuna gigantea*
coral limestone

end of
June 7 - Masalog Ridge,
Tinian I.

brink of eroded limestone cliff
brushy vegetation

✓ 39 *Jasminum marianum* DC.
very common in bush (and
in all parts of island)

40 *Cassia*
common

✓ 41 *Cardiospermum halicacabum*
common

✓ 42 *Colubrina asiatica*
common

✓ 43 *Scheuchzeria mariannensis* (A. DC.) Kuhn.
common

✓ 44 *Passiflora foetida* L. (var. *obtusifolia* V. L. (pinnate lvs))
common

herb 1 m. tall,

flowers yellow, 2-2.5
cm. across, petals yellow,
~~for drooping~~
obcordate, drooping very
easily.

— small tree or shrub,
2 m. tall, flowers white.
— slender small tree 5 m.
tall.

— tree 10 m. tall, fls.
— green, fragrant.
— vine climbing over trees,
flowers and fruits pendant.

scandent shrub,
flowers white, fruit
— green.

— ~~small~~ suffrutescent herb
up to 1 m. tall, fls. yellow,
leaves dull green.

— vine on ground and
climbing on shrubs, flowers
white.

— subsucculent shrub,
leaves glossy, fls. yellow.

— erect shrub 3 m. tall,
fruit strongly divergent.

— low shrub 1 m. tall, fls.
greenish white, aromatic. ^{lvs.} dull
(fruit from different bush) ^{about.}

- 24745 *Phyllanthus* ~~marianus~~
common in openings
- ✓ 46 *Capparis cordata* ^{*cardifolia* Lam.}
rare on edge of cliff
- ✓ 47 *Psychotria marianensis*
common
- ✓ 48 *Canthium* ^{*odoratum* var. *tinianense*}
common
- ✓ 49 *Fimbristylis cymosa* var.
- ✓ 50 *Bikkia*
common on brink of cliff
- ✓ 51 *Bikkia*
same
- ✓ 52 *Bikkia*
same
- ✓ 53 *Gossypium hirsutum* L.
common
- ✓ 54 *Canthium odoratum* var. *tinianense*
common
- ✓ 55 *Annona squamosa*
common
- ✓ 56 *Canthium odoratum* var. *tinianense*
common

- shrub up to 0.6 m. tall.
- leaves blue green ^{fleshy}, low branched
sub-shrub, one withered
flower, buds with one
side gibbous.
- shrub 1.5 m. tall, leaves
stiff, stipules not calyptrate,
flowers white, fruit red
when ripe.
- shrub 1 m. tall, fls. white,
fruit becoming black
when ripe.
- caespitose on ledges at
brink of cliff.
- small shrub 0.6 m. tall,
fls. white. leaves fleshy
same
- same
- shrub 1-1.5 m. tall, fls.
cream, turning rose; fruit
from different plant.
- shrub 1 m. tall
fruit immature
- shrub 1 m. tall
- shrub 1 m. tall, fruit
immature

June 9 Tinian City, Tinian
small patch of woods
on dissected coral on terrace

24757 *Psychotria marianensis*

✓ 58 *Ficus sp.*

✓ 59 *Ficus tinctorius*

✓ 60 *Canthium*

61 *Callicarpa*

62

common

✓ 63 *Deerandia amaranthoides*
rare

✓ 64 *Cassytha filiformis* L.
common, parasitic
on various plants

✓ 65 *Passiflora foetida* var. *hispida* (DC.) Killip
common everywhere

✓ 66 *Polyalthia gracilis* ~~repens~~
occasional

✓ 67 *Albizia lebbek*
common

- shrub 2 m. tall, fls.
- white, ripe fruit red.
- open tree 6 m. tall, fruit
- immature, largest ones
- pinkish with ^{red dots} banyan type
- with aerial roots,
- shrub 2 m. tall (others
- as large as trees), fruit
- yellow to orange.
- erect shrub 2 m. tall,
- fruit green.
- low shrub, 1 m. long,
- buds purple, ripe fruit
- turning ^{deep} purple.
- small tree, stigmas
- deep purple.
- vine, spikes pendent
- leafless, stems green,
- flowers white; ripe
- fruit white, fleshy.
- vine, climbing over
- shrubs; fruit orange.
- bracts deciduous when
- fruit is ripe.
- tree 6 m. tall, leaves thin;
- fruit green.
- tree 8 m. tall.

June 9 same
terrace just above ~~beach~~ ^{sea}
coral limestone about 5 m.
24768 *Jatropha gossypifolia*
abundant over much
of island.

- 69 *Cyperus*
common
✓ 70 *Pemphis acidula*
common very locally on
dissected limestone
✓ 71 *Hedyotis albidopunctata* (Merr.) Fock.
dissected coral limestone
✓ 72 *Fimbristylis cymosa* R.Br.
coral limestone
✓ 73 *Hedyotis foetidus* var. *marianensis*
coral limestone, common
✓ 74 *Scaevola frutescens* (Mill.) Kr.
common

June 9 Near Marps Wells, Tinian I.
around buildings in abandoned
cultivated ground.

- 75 *Boerhaavia diffusa*
occasional
✓ 76 *Desmodium triflorum*
carpeting ground, widespread
on island.

shrub 1-1.5 m. tall,
lower leaves green, upper
deep purple, glandular
hairs purple, green tipped;
flowers brick red; fruit
green.

tuft, spikes brown

low bushes up to 1 m. tall,
leaves astringent when
chewed; flowers white.
leaves fleshy, paler
beneath; fls. white,
caespitose, leaves stiff.

plants ^{foetid when broken,} ascending, up
to 5 dm., leaves leathery,
buds white, few.

shrub 1-2 m. tall,
flowers white; fruit
white, fleshy when ripe.

prostrate from a heavy
root crown, stems up to 1 m.
long, branched; leaves white
beneath, not fleshy.
prostrate; fls. purple.

June 9 - Mt. Lasso, Tinian I.
dissected limestone outcrop,
bushy tangled forest.

24777 *Morinda citrifolia* L.
common, widespread on island

78 *Melanolepis multiglandulosa*
common, widespread on island

June 10
79 *Lida*
common all over island
this plant sheltered.

80 *Lida*
common in abandoned fields
all over island (same as #24779)

81 *Lida acuta*
common in abandoned fields
all over island.

June 10 - ^{near} Lake Hagoya, north
end of Tinian I.
strand vegetation on dissected
coral, mainly *Thespesia*, *Excoecaria*,
Pemphis, *Messerschmidia*, etc.
with *Ipomoea pes-caprae* on
sand and *Hedyotis* in rock
crevices and cavities

82 *Messerschmidia argentea* (L.) Johnston
common

83 *Excoecaria agallocha*
84

commonest tree on dissected
coral

shrub 2 m. tall, leaves
glossy, fls white.
- small tree 3 m. tall,
- fruiting spikes pendent.
bush 1 m. tall, leaves
dark green above, gray beneath.

rounded gray bush 1 m.
tall.

stems ascending,
branching and leaf arrange-
ment distichous, color
light green.

small tree 4 m. tall,
leaves fleshy, silvery green,
flowers white, fruit pale
green, fleshy!
- small lactiferous tree
4 m. tall.

- 24785 *Fimbristylis cymosa* R Br.
dissected coral
- ✓ 86 *Thespesia populnea*
common
- ✓ 87 *Digitaria* ^{*gaudichaudii*} *marianensis*
occasional in sandy pockets
- ✓ 88 *Hedyotis albido-punctata* (Merr.) Fosb.
rock ~~cave~~ crevices and pockets
- ✓ 89 *Ipomoea pes-caprae* (L.)
sandy places, common
- 90 *Vitex*
common, back from shore
- ✓ 91 *Ipomoea quamoclit* L.
cultivated, ^{climbing} on wall around
cemetery
- 92 *Eragrostis*
^{abundant} weed in cultivated ground
- ✓ 93 *Delonix regia*
planted around settlements
and along roads
- ✓ 94 *Antigonon leptopus*
planted around buildings
- 95
weed around buildings
- ✓ 96 *Eragrostis amabilis* L.
weed everywhere
- 97 *Ipomoea*
weed around buildings

- caespitose, leaves not
stiff.
- small tree, flowers
pale yellow
- rather stiff tufts,
spikes appressed.
- recumbent to ascending,
leave fleshy, pale beneath,
flowers white, tube ~~enlarged~~,
throat constricted, lobes
divergent.
- extensive vine, prostrate
on ground.
- shrub 2-3 m. tall,
fls. purplish.
- slender vine, flowers
scarlet.
- spreading clump
- flat-topped tree 6 m. tall,
fls. scarlet, lower petal
at first pink with red
spots, turning reddish.
- vine, flowers bright
rose pink.
- low, spreading
- prostrate, creeping on
ground, fls. purple, closing
at about 10:30 a.m.

- 24793 *Chloris inflata*
common along roadsides
- ✓ 99 *Dactyloctenium aegyptium* (L.) Gauss.
common everywhere
- 24700 *Euphorbia*
common everywhere
- ✓ 01 *Euphorbia hirta*
abundant everywhere
- ✓ 02 *Euphorbia prostrata*
abundant everywhere
- ✓ 03 *Phyllanthus ^{amabilis Schumacher} ~~viscous~~* ^{det. G. B. Webster}
abundant everywhere.
- ✓ 04 *Boerhaavia diffusa* ^{repens}
common
- ✓ 05 *Bambusa blumeana* Schult. f. ^{det. F. A. McClure}
planted
- ✓ 06 *Bambusa vulgaris* Schult. f. ^{det. F. A. McClure}
planted
- ✓ 07 *Alpinia speciosa*
planted
- ✓ 08 *Carica papaya*
common everywhere

Tufts

spreading, rooting
at nodes.
prostrate, plant green.

decumbent base, tips
ascending and arching,
unusually luxuriant.
prostrate, plant purple.
erect

prostrate, stems elongate,
fls. pink
clumps with culms crowded
rather closely, dark
green, up to 6 m. tall.
lower branches very
springy, forming a tangle
— sheaths from 4th & 5th nodes
clumps with culms
from 5 to 15 cm. apart,
up to 6 m. tall, dark green,
sheaths from 5th node,
culm sample 4th & 5th nodes
— (young & old culms)
large clump 7 m. tall
fls. ~~short~~ white with
red tips, lip yellow
— marked with red.
columnar soft stem
with crown of large
leaves, fls. white ♂.

~~2480~~ June 10 Marpo Valley, near
Marpo Wells, Tinian Island
limestone slope, abandoned
orchard

24809 *Terminalia catappa* L.
near house

✓ 10 *Polypathia pyramis*
common second growth tree

✓ 11 *Canthium*
second growth in orchard

✓ 12 *Ipomoea peruviana ventricosa*
common climbing over trees

June 10 Mt. Lasso, Tinian Is.
limestone slope, abandoned
June 10 Camp Churo,
Tinian Is.

✓ 13 *Digitaria ciliaris*
abandoned camp site.
open ground

✓ 14 *Cosmos sulphureus*
open ground

✓ 15 *Argemone mexicana*
open ground, large colony

spreading tree 8 m. tall,
flowery white, fruit
thick, baccinate.

small tree 4 m. tall,
leaves thin, dark green,
fruits green

shrub 2 m. tall, fruits
dark green to black.

great herbaceous vine
many meters long,
almost completely
covering trees.

decumbent with
ascending ~~scapes~~
scapes. plant very
blue-glaucous, hairs
glistering
ray flowers intense orange

glaucous herb, flowers
bright yellow.
leaves white along vein

June 11 - Marpo Valley, Tinian I.
abandoned cultivated land

24316

Sporobolus ~~*testaceus*~~ *testaceus* (Sw.) R. & S.
planted about old house site

17

solid stand on terrace of
deep black soil

18

Capparis cordata *cordifolia* Lam.
common on ~~small~~ small
makatea outcrops

June 11 - Terrace above ocean
on s.e. side of ~~island~~ Tinian
Island grass-covered
terrace of deep black soil
with outcrops of dissected
coral or makatea, ~~at foot~~
weathered talus slopes at foot
of slopes with low brush

19

Portulaca oleracea
~~abundant~~ in disturbed places
and along road on terrace

20

Vernonia cinerea
common on terrace in
disturbed places

shrub 2 m. tall, stems
branched principally
at base, not inflated,
flowers lavender.

sterile, slightly
gray-green.

low suffrutescent
herb, somewhat
scandent, leaves
glaucous; flowers
wilted at 11 a.m. (said
to have been at 9:00 a.m.),
fleshy, white; buds with
strongly gibbous, ^{compressed}
lower sepal; immature
fruit with 5 strong ribs,
stipe recurved.

~~Thespesia~~
of *Thespesia*, *Mysoporum*,
Chorisia and several
other shrubs, with
Cassytha; *Bikbia* around
cliffs and limestone outcrops

fleshy, fls. yellow, about
1 cm. or less across.

erect, fls. purplish.

- 24821 *Miscanthus floridulus*,
dense small patch ~~on~~ ^{on} terrace.
- ✓ 22 *Rhynchosia calosperma* Wats.
occasional in grass on terrace
- ✓ 23 *Heteropogon contortus*
common locally on terrace
- ✓ 24 *Chrysopogon aciculatus*
occasional on terrace
- 25 *Cyperus*
occasional on terrace
- 26 *Cassia*
occasional on terrace
- 27 *Abutilon*
rare on lower slopes
- 28 *Allophyllus*
rare on lower slopes
- 29
common on slopes
- ✓ 30 *Polypodium scolopendrium*
very common on slopes and
coral outcrops
- 31
rare, tufts in crevices on face
of ~~the~~ limestone cliff
- ✓ 32 *Blechnum brownii* ~~var. puberulum~~
common in small openings
on slope
- ✓ 33 *Achyranthes aspera*
occasional small patches
- ✓ 34 *Wedelia biflora* var. *complanata*
common around slopes and at
foot of cliffs

canes 2 m. tall, forming
dense brake.

prostrate vine,
mostly sterile.
stems weak, recumbent

small tufts

~~flower~~ low bush, 0.8 m.
tall, fls. yellow.
suffrutescent herbs

scandent shrub,
fls. white
low bush 1 m. tall,
stiff, only seen in bud,
branches erect, ~~leaves~~ ^{leaves}

small tufts

prostrate herb with erect
branches, corolla pale purple,
drooping very easily.
stems spreading, elongate,
ascending at tips, staminal
tube deep crimson.

prostrate, tangled elongate
stems, fls. yellow.
leaves with slight frosty appearance

- 24835 *Bikkia*
common on and about foot of
limestone cliffs
- ✓ 36 *Heliotropium anomalum* H. & G.
rare on ledges of limestone
- ✓ 37 *Emilia sonchifolia*
common generally
- ✓ 38 *Bikkia*
common on and about foot of
limestone cliffs.
- 39
common on slopes
- ✓ 40 *Portulaca ~~parvifolia~~ australis*
rare on slopes
- ✓ 41 *Mysoporum borinense* Koidz.
very common on slopes
- 42 *Zoysia ^{tenuifolia Trin.} matrella*
common on slopes, in places
forming a carpet.
- ✓ 43 *Lepturus repens*
common on slopes

- shrub 1-2 m. tall, leaves
thick, leathery, glossy,
flowers white, almost
odorless, margin of
corolla revolute in age.
leaves fleshy, flowers
white with yellow tube,
honey-like odor.
flowers purple.
- shrub 1-2 m. tall, leaves
thick, leathery, glossy;
flowers white, almost
odorless, margin of
corolla revolute in age
prostrate in exposed
places, a low shrub
in sheltered places. flowers
yellow.
- prostrate,
plant fleshy, leaves
somewhat compressed.
prostrate in exposed places,
low shrub when sheltered,
flower white with honey-
like odor, fruit deep
magenta-purple when
ripe, not angled.
not pungent.
- small ~~tufts~~ tufts.

- ✓ 24344 *Hedyotis albidopunctata* (Merr.) Fock.
common on slopes

- ✓ 45 *Oxalis corniculata* var. *repens*
common on open slopes

June 11 Marpo Valley, Tinian I.
abandoned cultivated land.

- ✓ 46 *Cassia occidentalis*
one of commonest plants

- ✓ 47 *Eleusine indica* L.
Polanixia isoxandra
very abundant

- 48 *Cyanotus*
common

- ✓ 49 *Physalis lanceifolia* Nees
common

June 11 west side of Island
"Palm Beach" Tinian I.
cliffs of limestone, covered with
small trees, at bottom talus
covered by *Darringtonia asiatica*,
moist.

- ✓ 50 *Tacca leontopodioides* L.
small colony in shade on talus
- ✓ 51 *Dioscorea bullifera* L.
rare on talus in shade

Tinian

prostrate, stems red.
leaves fleshy; flowers
white, ^{lobes} strongly divergent,
narrowly oblong, throat
closed with hair; immature
fruit fleshy. corolla tube
~~dilated~~ at middle.
prostrate, flowers yellow.

herb 1.5 m. tall, flowers
yellow. Japanese were
said to have used seeds
as a coffee substitute.
herb with rank odor,
yellow flowers.
flowers lavender,
perianth tube long, petals
unequal, deliquescent.
herb, much branched, 0.7 m.
tall, flowers pale yellow

Top covered by tall brush,
leading to *Scaevola* out on
point, then to open *Zoisa*
flat, then to bare dissected
limestone.

sterile

sterile

24852 *Barringtonia asiatica*
talus at base of cliffs, dominant

53 shade on talus at foot of
cliffs

54 *Asplenium*
on cliffs

✓ 55 *Cordia subcordata*
common on cliffs

✓ 56 *Digitaria* ^{*gaudichaudii*} ~~*marianensis*~~
rare on cliffs

✓ 57 *Premna obtusifolia* A. Br. (painted lvs.)
common in brush at top of cliff

✓ 58 *Tarenna samboina*
common in brush at top of cliff

same open coral flat at top
of cliff on point.

✓ 59 *Scaevola frutescens* (Mill.) Kr.
common, especially away from
point

60 *Callicarpa*
common in edge of brush

✓ 61 *Boerhaavia diffusa* repens
~~occasional~~ occasional on grassy flat

✓ 62 *Heliotropium* ~~*anomalum*~~ ^{*anomalum*}
common on bare dissected
coral

Tinian

large tree 12 m. tall,
flowers white, stamens
pink distally.
fronds erect.

trees 5 m. tall, (flowers on
young sprout), flowers
brilliant deep orange.
fruit green.
~~large~~ tufts

✓ bush 2 m. tall, fls.
pale green, aromatic.
leaves only slightly glossy.
shrub 3 m. tall, fls.
white, fading yellowish;
fruit immature.

low rounded bush 1 m. tall
(getting lower toward point)
fls. white; fruit white, fleshy.
low shrub 1 m. tall,
flowers purple, ripe
fruit deep purple.
prostrate, reddish.
fls. pink, leaves thin.
prostrate, leaves fleshy,
fls. white with yellow center,
honey odor, (only one kind - deeply lobed,
noted)

- 24963 *Hedyotis albida* - punctata
open dissected coral
- 64 *Lida*
open dissected coral
- 65 *Evolvulus*
open dissected coral
- 66 *Zoysia matrella* ^{*terrestris* Trin.}
dominant on open coral flat
- 67 *Jasminum marianum* DC.
in bush at top of cliff
- 68 *Uncle Sam's curassavica*
abandoned cultivated land
- 69 *Pachyrhizus erosus*
in bush at top of cliff, local
- 70 *Psidium guajava*
in bush at top of cliff,
only occasional on island
- 71 *Psychotria marianensis*
occasional in bush at top
of cliff

June 11 Mt. Lasso, Tinian I.
forest on limestone bluffs
surrounded by abandoned
cultivated land.

- 72 *Cerbera manghas* ^{*appositifolia*}
in pasture, almost
strangled by *Ficus*

June 12 same
73 *Ficus*
edge of cultivated ground

- prostrate, fls. white,
lobes narrow.
prostrate
- prostrate, fls. blue
forming a dense carpet.
- scandent shrub,
fruit shining, black.
erect herb, corolla red,
crown orange
vine climbing through
bush, several m. long.
shrub 1.5 m. tall,
fruit immature.
- shrub 2 m. tall, leaves
glossy, esp. on young
growth, flowers white,
ripe fruit red.

tree 5 m. tall, flowers
white, fruit green,
terete.

large tree, fruit green
when ripe

- 24874 *Heliotropium indicum* L.
weed around house
- ✓ 75 *Cyperus kyllinga*
weed around house
- ✓ 76 *Ricinus communis*
cult. as ornamental
- ✓ 77 *Cynodon dactylon* (L.)
around house, well
scattered over island
- ✓ 78 *Catharanthus roseus* (L.) G. Don
in garden, but escaped
and well distributed
over island.
- ✓ 79 *Echinochloa colonum*
weed near house
- ✓ 80 *Paspalum conjugatum*
~~sp. sp.~~ old cultivated
ground, most abundant
plant on island.
- ✓ 81 *Leucaena ~~glauca~~ leucocephala*
very common in abandoned
land.
- ✓ 82 *Urena lobata* L.
occasional in abandoned land
- 83 *Sida cordifolia*?
rare, in eroded place
- ✓ 84 *Vigna marina*
eroded land, widespread on island
- ✓ 85 *Ertalaris saltiana* ^{Malloids} ^{var. ~~maritima~~ Desv.}
very common in abandoned land
- 86 *Strongylocodon*
edge of cliff

flowers white with
yellow center.
heads white.

shrub 2.5 m. tall.

forming dense turf.

erect suffrutescent
herb 0.5 m. tall.

flowers magenta
(other plants white)
spreading from rosette
crown.

rooting at nodes,
running, culms
erect.

shrub, 1-2 m. tall,
fls. whitish, anthers
salmon-buff.

erect, plant reddish green.

prostrate sub-shrub.
extensive.

prostrate, peduncles erect,
flowers yellow, keel straight.

herb 2 m. tall, flowers
yellow with brown
markings on standard.

extensive vine, racemes
pendant, standard
deep maroon, wings & keel
lighter, almost crimson.

- 24
✓ 887 *Polyscias grandifolia* Vahl.
limestone on top of cliff,
shaded.
- 88 *Polyscias*
planted as ornamental
- ✓ 89 *Casuarina equisetifolia*
planted extensively for windbreaks
- 90 *Polyscias*
planted as ornamental
- ✓ 91 *Codiaeum variegatum*
planted as ornamental
- ✓ 92 *Acacia confusa*
extensively planted for windbreaks
- ✓ 93 *Calophyllum molle* ~~Calophyllum~~
planted as ornamental
- ✓ 94 *Nicotiana glauca*
persisting from cultivation
- ✓ 95 *Zephyranthes rosea*
persisting from cultivation
- ✓ 96 *Cerbera dilatata*
top of cliff
- ✓ 97 *Abrus precatorius*
tangled in the vegetation
at top of cliff.
- ✓ 98 *Pithecellobium dulce*
common everywhere

June 12 Camp Churo, near
center of Tinian I.

- 99 *Ficus*
around buildings

- shrub 2 m. tall,
leaves glossy, plant
with slight celery odor.
- erect shrub 2 m. tall, fruit
blue-gray, rubbing to
black.
- tree 8 m. tall
- erect shrub, leaves
stiff, crinkled.
- erect shrub, leaves
spotted with white.
- small rounded tree
- tree 8 m. tall, flowers
white, fragrant.
- herb 1 m. tall, flowers
pink, herbage sticky.
- dense cushions, flowers
bright rose pink.
- tree 5 m. tall, flowers
white, pinkish on tub.
- vine climbing in trees.
seeds red and black.
- tree, branches ascending,
sterile.

banyan type but trunk
not very well developed.
tree 8 m. tall, ripe fruit
purple.

June 12 - ^{yellow} Officers Beach, e.
side Tinian I.
sandy beach surrounded
by coral limestone bluffs
sand covered by *Ipomoea*
pescaprae, *Triumfetta*, etc.
bluffs with *Lempsis* with
a few other shrubs
& *Hedyotis*

- 24900 *Malvastrum coromandelianum*
roadside, one of principal
weeds in abandoned fields.
- ✓ 01 *Amaranthus viridis*
roadside weed, common
 - ✓ 02 *Cleusine indica*
one of commonest weeds on island,
roadside
 - ✓ 03 *Hibiscus tiliaceus* L.
in forest back of cliffs, common
 - ✓ 04 *Cenchrus echinatus*
common roadside weed,
found everywhere
 - 05 *Ipomoea alba* L.
very abundant in forest
behind bluffs
 - ✓ 06 *Thuarea involuta*
on sand back of beach
 - ✓ 07 *Terminalia* ~~randallii~~
on limestone bluffs, exposed
 - ✓ 08 *Hedyotis albidopunctata* (Nees) Forst.
limestone bluffs

scraggly woods ^{on} ~~at~~
bluffs covered by
great growth of *Ipomoea*
alba and *Passiflora foetida*

flowers yellow

prostrate

spreading tufts.

small tree 4 m. tall,
leaves very dark above,
white beneath.
spreading tufts.

great vine almost
smothering trees.

prostrate, forming a
loose mat.
shrub 1.5 m. tall,
fruit very young
prostrate, stems red.
flowers white. leaves
fleshy

✓ 24909 *Ipomoea pes-caprae*
sandy beach

✓ 10 *Triumfetta procumbens*
sandy beach

✓ 11 *Wedelia biflora* var. *canadensis*
common on sandy beach

12 *Ficus*

lower face of bluff

✓ 13 *Heliotropium anomalum* H. & A.
sand at foot of bluffs
not common. (with #23914)

✓ 14 *Heliotropium anomalum* H. & A.
sand at foot of bluffs,
not common (with #23913)

15

common along trail in bush

✓ 16 *Scaevola frutescens* (Mill.) Kr. var. ?
common on bluffs

June 13 North Air Field,
Tinian I.

coral flat becoming
very rough toward the sea
covered by large patches
of *Verbesina*, *Pemptis*,
Heliotropium anomalum,

extensive prostrate vine,
rooting in sand, flowers
bright purple.

extensive creeping
prostrate branched vine.

prostrate, extensive,
flowers on ascending
branches, yellow.
leaves fleshy.

shrub 1.5 m. tall.

fruit immature.

prostrate to ascending,
lvs. fleshy; flowers yellow
with white lobes,
slight honey odor.

prostrate to ascending,
leaves fleshy; flowers
white with yellow center,
strong honey odor.

stem prostrate, branches
ascending, corollas
lavender, falling very quickly.

small shrub (others larger)
flowers with central
third of lobe purple,
fruit immature.

etc., with *Hedyotis albipunctata*
between. *Myoporum*
here and there.

- 24917 ✓ *Heliotropium anomalum* H. & A.
rough coral, forming almost
pure stands of many
square meters each.
- ✓ 18 *Capparis cordifolia*
on raised blocks on rough
coral flat
- ✓ 19 *Hedyotis albidopunctata*
in ~~ca~~ small cavities in
rough coral
- ✓ 20 *Portulaca oleracea*
common along disturbed
roadside
- ✓ 21 *Portulaca oleracea?*
top of coral bluff, back of
flat south-east of air field
- ✓ 22 *Ficachea insularis* (L.) HBK.
roadside west of air field

- plant fleshy, prostrate
to ascending. flowers
white with strong yellow
center, honey scented, scarcely
or not dimorphic.
- subscandent shrub,
leaves ~~so~~ fleshy, somewhat
glaucous, minutely
viscid glandular but
not pubescent; at 8:30 a.m.
some flowers wilted,
those in shade still open,
obviously a night-flowering
species, flowers cream-
white, fragrant.
- prostrate to ascending,
stems red to green,
leaves fleshy; flowers
white, lobes patent,
elliptic-ovate.
- plant fleshy; flowers
yellow, 1 cm. across,
stamens about 20,
fls. closing ~~at about~~ ^{at about} 11 a.m.
- tree 8 m. tall, lactiferous;
leaves thinly arachnoid
sericeous beneath.

June 13 "Broadway", s.w. of
Yellow Beach

abandoned cultivated land

24923

Clitoria ternatea

covering solid patches
in field near road.

✓ 24 *Annona muricata*
roadside tree

✓ 25 *Antocarpus altilis*
Tree around old home-site

26 *Cucurbita*
persisting after cultivation

✓ 27 *Morus*
around old house site

✓ 28 *Luffa acutangula*
persisting after cultivation

✓ 29 *Acalypha wilkesiana*
roadside ornamental

✓ 30 *Cajanus cajan*
persisting after cultivation

~~31 *Ipomoea pes-caprae* foot of cliff~~

31

ledge near foot of
limestone cliff

✓ 32 *Pipturus argenteus*
foot of limestone cliff
common in forest

vine matting ground,
flowers deep blue,
white toward base
of petals.

tree 5 m. tall, fruit
large, prickly.

tree 3 m. tall, lactiferous.

prostrate vine, leaves
flecked with gray,
flowers orange.

tree 5 m. tall

prostrate vine, inflorescence erect, flowers

— bright ~~yellow~~ yellow.
shrub 2 m. tall, leaves
various shades of
red and orange-red;
style, red.

bush 2 m. tall

June 13 "Broadway" n.e. of Yellow Beach,
easternmost ~~hump~~ hump of 2nd line of cliffs
soft stemmed, thick stemmed
shrub 1.5 m. tall, leaves
— young, buds green.

small tree 4 m. tall,
at.

June 13 - Mt. Lasso, Tinian I.
around old shrine grounds,
now abandoned

24933 *Canna*

planted ornamental

✓ 34 *Lanceviera tripartita*

planted ornamental

✓ 35 *Clodendron Thompsonae*

planted ornamental

June 13 Camp Lasso, Tinian I.
Cordia alliodora - jobi
roadside weed

✓ 36 *Leuca pentandra*
roadside tree

June 13 Camp Lasso, Tinian I.

~~old~~ abandoned cultivated region

✓ 37 *Coccoloba lachryma* - jobi
roadside weed

✓ 38 *Bougainvillea glabra spectabilis*
planted as ornamental

✓ 39 *Ipomoea bigelovii*
persisting after cultivation

herb 1.5 m. tall, flowers
brilliant scarlet. fruit
maroon, tuberculate.
leaves erect, gray and
green mottled, the
form with white
edges growing nearby.
berries orange red
vine, calyx white,
corolla deep blood-red

fruit at first lead black,
then pearl gray.

tree 8 m. tall, ~~the~~
branches perpendicular
to tall straight trunk,
widely spaced; fruit pendent.

fruit lead black when
young, then pearl gray.

scandent shrub, bracts
magenta, flowers white.
erect 1.5 - 2 m. tall.

Euphorbia heterophylla (not so common), *Asclepias curassavica* (not so common), *Eleusine indica*, *Portulaca oleracea*, *Cenchrus echinatus*, *Amaranthus spinosa*, *A. sp.* (less common), *Cyperus stuppeus*, *Cassia occidentalis*, *Vernonia cinerea* (less common), *Phyllanthus niruri*, *Dactyloctenium aegyptium*, *Eragrostis amabilis* (less common). More local are *Ipomoea indica* (?), *Ipomoea sp.* (24797), *Cynodon dactylon*, *Clitoria ternatea*, *Tricachne insularis* (rare), *Cehinochloa colonum*, *Catharanthus roseus*, *Cyperus byllinga*, *Urena lobata*, *Trumfetta semitriloba* (Horaka coll.), *Physalis sp.*, *Polanisia icocandra* (abundant in Marpo area, important host for insect pests), *Oxalis*, *Chrysopogon aciculatus*, *Argemone mexicana*, *Chloris inflata*, *Eragrostis sp.* (rare), *Amaranthus* (24730), *Aeschynomene indica*.

Where the land has been abandoned longer bushy patches are appearing, with *Jatropha gossypifolia*, *Leucaena glauca*.

Psidium guajava, *Indigofera suffruticosa*, *Passiflora foetida*, *Carica papaya*, *Sida sp.* (24779, 80), *Morinda citrifolia*, *Annona squamata*. These places are usually smothered by *Passiflora foetida* and sometimes *Ipomoea* (24712).

Old house sites may be detected by small groups of *Artocarpus*, *Musa*, *Ficus*.

Terminalia catappa, *Annona muricata*, *Morus* (rare), etc. *Nicotiana glauca*.

Vigna marina and *Ipomoea pes-caprae* form occasional patches inland especially where the top-soil has been removed by bull-dozers or erosion. They are, of course, common on the coast.

The Japanese, after they had completely destroyed the natural forest vegetation, found the wind detrimental to their agricultural activities on the bar plateaus that remained. To correct this extensive wind-breaker of *Casuarina equisetifolia* and *Acacia confusa* were planted. These remain. In the broad strips of *Acacia* there is absolutely no undergrowth, not even ferns, grasses or mosses. I did not examine a similar planting of *Casuarina*. *Cecropia pentandra* was planted along some of the roads.

In the fields, persisting from cultivation are great quantities of *Saccharum* and *Pennisetum purpureum*. Little traces of Zea, Raphanus, Lactuca, ~~China~~ Brassica (Chinese Cabbage), Cucumis sativa, C. melo, Cajanus cajan, Solanum vulgare remain, other than a few scattered plants. Cucurbita pepo, Lagenaria ciceraria, Luffa acutangula, ^{Thunbergia} Cosmos sulphurea (?),

Catharanthus rosea ~~are~~ persist more abundantly. The U.S.C. papaya patch is still in good shape and produces quantities of fine "solo" fruit. Also papayas are spontaneous all over the island. A citrus grove of sour oranges and limes planted by the Japanese lies in the north side of Marpo Valley, but has now grown up somewhat to other trees.

Common plants cultivated around camps, etc. are *Pseuderanthemum eldorado*, *P. atropurpureum*, *Graptophyllum pictum*, *Catharanthus*

roseus, *Delonix regia*, *Cassia glauca*, *Bauhinia monandra*, *Acalypha wilkesiana*, *Codiaeum vulgare*, *Polyscias fruticosa*, ~~top~~ of several fancy forms, *P. guilfoylei*, *Canna hybrida*, *Annona muricata*, *Antocarpus altilis*, *Terminalia catappa*, *Calophyllum inophyllum*, *Zephyranthes rosea*, *Oleodendron thompsonae*, *Pisonia communis*, *Ipomoea erecta*, *Alpinia speciosa* (rare), 2 sp. of Bamboos (rare), *Antigonon leptopus* (rare), *Ipomoea quamoclit*, *Annona muricata*, *Zizania matrella*, etc. Most of these were doubtless brought by the Japanese and some of the very specimens now cultivated were planted by them, as their size attests. Bromeliads are rare.

The ~~set~~ different levels are separated by escarpments a row of limestone bluffs which are covered by a thick forest excepting on some too abrupt places. Where there is no forest a sparse shrubby growth of *Bilbilis*, ~~Psychotria~~ *Psychotria marianensis* etc. is found. This is usually

not far from the ocean. The forest is of *Occhrosia* sp., *Cerbera* sp., *Psychotria marianensis*, *Cynometra* sp., *Melanolepis multiglandulosa*, *Pisonia grandis*, *Pipturus argenteus*, *Guamnia saffordii*, *Erythrina* sp. about 2 or 3 sp. of *Ficus*, *Aglaia* (Hosaka coll.), *Morinda citrifolia*, ~~*Passiflora*~~ ~~*with Passiflora*~~ sp., *Premna*, *Colubrina asiatica*, a variable population of *Canthium*, *Polypcias* sp. (24837 var), 2 rare unident. sp. (24921, 24931), tangled with ~~*Clusia*~~ *Passiflora*. *Ipomoea* (24812), *Alnus precatiorum*, *Mucuna gigantea*, *Strongylodon*, *Passiflora foetida*, etc. There is little or no under growth in these forests except where disturbance has taken place.

A somewhat similar forest appears on outcroppings of dissected coral on the flat lands. *Ficus* seems to be more common here. *Albizia* sp. is common, possibly naturalized.

The original vegetation of the terraces may have been similar to this, but probably richer in species.

On the terraces toward the brows of these cliffs, and especially toward the sea cliffs the soil thins out to nothing. Before it has thinned to nothing a somewhat similar forest occurs, but with the addition of *Tarennia* sp., *Wikstroemia* sp. and with *Premna* more common. It is gradually reduced to brush where the soil becomes too thin. The brush has many of the same species as the forest, *Premna*, *Occhrosia*, *Eugenia*, *Canthium*, *Psychotria*, *Colubrina*, *Annona*, *Callicarpa*, etc. Added are *Pilea marianensis*, *Phyllanthus* sp., *Capparis cordata*, *Cassia* sp., and, at low altitudes, *Scaevola frutescens* and *Pemphis acidula*, unident. bush (24829), *Myoporum*, etc. *Polypodium scolopendrium*.

On the high cliffs on the west side a better development of forest exists, especially on the talus at the base, where *Barringtonia asiatica* is dominant, with some *Pandanus*. Here the soil is moist and ferns, *Tacca*, *Dioscorea*, etc. grow in the shade.

On the cliffs, *Cordia subcordata* is very important. *Asplenium Polypodium scoparium*, *Hedyotis foetidus* var. *marianensis*, ~~and~~ *Digitaria marianensis*, ~~are found~~ and *Phyllanthus* sp. are found commonly.

On windswept headlands ~~at~~ an extreme strand vegetation ~~is found~~ is found.

This is on coral rock usually quite dissected and with little soil. Inward there is a belt of *Scaevola*, *Capparis*, *Callicarpa*, etc. becoming lower and giving place to abundant *Myoporum*, *Heliotropium argenteum*, *Zoysia matrella* (common, forming carpets), *Vicia*, *Sida* sp. (24864), *Hedyotis albidopunctata*, *Evolvulus* sp. The relative abundance and distribution of these varie from place to place.

~~On the sea~~ At low altitudes *Pemphis aurula* enters the picture, often as a dominant over large plots, also *Terminalia catappa*, *Wedelia biflora*, *Excoecaria* (?), *Messerschmidia argentea*, *Thespesia populnea*, etc.

On a terrace ~~of~~ on the s.e. side there is deep black soil almost completely covered by dense

growth of a grass that may be *Sporobolus virginicus* (24817) with a dense patch of a reed (24821), patches of *Heteropogon contortus*, *Achyranthes*, occasional *Vernonia cinerea*, *Portulaca* ~~testa~~ *oleracea*, *Chrysopogon*, *Cyperus* 2 sp., ~~etc.~~ etc.

Above on weathered talus slopes this gives way to the bush described on p. 197 with *Myoporum*, ^{hikihiki} *Polypodium*, *Eugenia*, *Canthium* and 24827 important, and added 24839.

Wedelia, *Abutilon*, *Allophylus*, *Achyranthes*, etc.

toward the sea cliffs at the n.e. end, very prostrate *Myoporum* 24839, *Hed. albidop.*, *Zoysia*, *Lepturus repens* and *Dialis corniculata* dominate the ~~sea~~ vegetation. Toward the rest of the cliffs elsewhere are occasional outcroppings of dissected coral with *Capparis* principally. The deep soil of the terrace was cultivated in sweet potatoes by the Japanese.

On the few beaches *Ipomoea per-caprae*, *Wedelia biflora*, *Vigna marina*, *Triumfetta* *swarzensis*, *Digitaria marianensis*

Messerschmidia argentea,
Scaevola frutescens, etc.
 are important.

The vegetation of the island may be briefly summarized as a strand vegetation, becoming more extreme in exposed places near the ocean and becoming more luxuriant and mesophytic inland and in sheltered places. It has been greatly altered by man, especially on flat, tillable ground.

June 9 - Mt. Lasso, Tinian I.
 around buildings

42490

on rotting wood

41

on rotting wood



